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ABSTRACT

This report, a part of the Cost and Funding Studies supportive of the development and implementation of western interstate bibliographic network capabilities, summarizes the results of cost data collected in 76 western libraries--public, academic and State. The focus of these studies was upon technical services and interlibrary loan. Analysis included results of a cost survey, a survey of interlibrary loan traffic, twelve in-depth case studies and an examination of three western bibliographic centers. Based upon a stratified sample of 100 libraries, these studies document present cost incurred for cataloging, acquisitions, serials processing and interlibrary loan across a wide range of libraries. A related publications list, sample characteristics, libraries included in the surveys, activities sheets and task definitions, and a glossary of terms are appended. (Author/KP)

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SURVEY OF COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN

SUMMARY

by

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and

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Project No. 475AH50102
Grant No. G 00 7500741

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ABSTRACT

This report, a part of the Cost and Funding Studies supportive of the development and implementation of western interstate bibliographic network capabilities, summarizes the results of cost data collected in 76 western libraries--public, academic and State. The focus of these studies was upon technical services and interlibrary loan. Analysis included results of a cost survey, a survey of interlibrary loan traffic, twelve in-depth case studies and an examination of three western bibliographic centers. Based upon a stratified sample of 100 libraries, these studies document present cost incurred for cataloging, acquisitions, serials processing and interlibrary loan across a wide range of libraries.

SURVEY OF COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN - SUMMARY

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I. INTRODUCTION

The following is a summary report of library costs in technical processing and interlibrary loan as observed in a sample of libraries in seventeen western states and British Columbia. The report is a product of the Cost and Funding Studies supportive of related investigations (supported by the Council on Library Resources) into the development and implementation of western interstate bibliographic network capabilities conducted by the Western Interstate Commission for Higher Education (WICHE) under Grant No. G 00 7500741 from the U.S. Office of Education (USOE). The overall goals of the project were to:

- determine representative costs of library services in areas of potential network support;
- evaluate the impact of network services upon library costs; and
- examine the economic issues and implications of networking.

This report represents one of the outcomes in pursuance of the first goal. The reader is directed to Appendix A for a complete list of publications resulting from these studies.

A. Background

Retracing the background of these studies, in 1974, the developing network supplying products and services to the western states gave impetus to studies into the potential of regional networking in the western states. The vast geographical area (2,411,477 square miles) and the uneven distribution of the 42 million western inhabitants suggested that unique planning and development for western networking were necessary. To effect this goal, the Western Interstate Library Coordinating Organization was created. The organization has among its objectives the coordination of resource sharing in the western states, and the provision of a forum to allow the diverse organizations within the West a voice in networking in the West. The reader is directed to the publications resulting from the CLR project listed in Appendix A.

Similarly, the costs of present library services, and most particularly within technical processing and interlibrary loan incurred within western libraries were undetermined. Unless current cost information could be obtained, there would be no base of comparison for future study of the impact of networking in the West upon library costs. For this reason, a survey of costs, coupled with twelve case studies in technical processing and interlibrary loan, were conducted. In addition, a survey of interlibrary loan traffic throughout the West was used to monitor the present patterns of lending and borrowing in academic, public and state libraries.

B. Scope of the Study

These studies encompassed expenditures and patterns within technical services (cataloging, acquisitions, serials processing, and materials finishing) and interlibrary loan for academic, public and state libraries. The seventeen states of Alaska, Arisona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, New Mexico, North Dakota, Nevada, Oregon, South Dakota, Utah, Wyoming, and Washington, along with the province of British Columbia were included. A sample of 100 libraries were included representing 15 state libraries, 42 academic libraries and 43 public libraries. Results included in this summary are from 76 libraries -- 28 academic libraries, 38 public libraries, and 10 state libraries. Fifty of these libraries participated in the interlibrary loan survey. Twelve libraries from the wider sample participated as case studies requiring additional data collection. Included were five academic libraries, five public libraries, and two state libraries.

In addition to cost data collection, the survey examined volume and characteristics of throughput, level of outside support procured to supplant in-house tasks (e.g. through a jobber, network or processing center), and the level of in-house automation maintained by the participants. Full documentation of all findings are available in the Survey of Costs in Technical Processing and Interlibrary Loan--Survey Tables and Results of Case Studies. The results covered by this report highlight findings and conclusions from this survey.

C. Interpretation of Results

The reader is cautioned that the results of this survey, and related studies, are based upon the responses of 76 libraries. Interpretation of definitions (though specified in the questionnaire) and of questions may vary among participants. For the purposes of this report, observations which were considered misleading, or misrepresentative, were deleted from consideration; these observations, however, are included in the results found in the Survey Tables, cited above.

Results from the case studies, and from the interlibrary loan survey, are not necessarily representative of workload or throughput throughout the year; the surveys were taken towards the close of the year, and thus may reflect diminished workload among the academic libraries. Further, data collection, intrinsically, can hinder the accuracy of the data; and, may further construct a situation which is atypical. For the case studies, as well, round-off errors (persons collecting data were to round-off time observations to the nearest five minute interval) can not be counterbalanced when volume throughput is low. Special consideration should be given to the diverse procedures and responsibilities of each of the participants, and each of the departmental divisions studied.

D. Major Findings

The selective findings of this report are not complete. The reader is directed to the Survey Tables, cited above, for complete results of the survey and case studies. However, there are a number of findings which should be noted here, and which are of interest to these studies:

- Large Academic and Public Libraries reflect similar sources of ordering (depending more heavily upon approval plan processing, 21% and 19%, respectively, than observed in other strata); while academic and state libraries reflect similar publication date acquisition concentrating more heavily upon pre-1975 publications than do public libraries.

- Acquisition tasks absorbed more staff time per order processed among smaller libraries, where small volume throughput did not allow for economies of scale, and access to acquisition tools was limited.

- Cataloging costs reflect a U-shape distribution (with large and small libraries indicating the highest unit costs, and middle-sized libraries achieving the lowest per unit costs).

- Similar-sized libraries (e.g. Large Public and Large Academic libraries) indicate similar sources of cataloging (i.e. LC copy, NUC, CIP, secondary source, and original cataloging) and similar cost patterns.

- Direct relationships appear evident between card per title ratios, cataloging source and average unit costs of cataloging.

- The majority of materials requested by or from participants in the ILL survey were post-1950 publications; while 50% of the requests to at least one of the bibliographic centers are for materials published within the last ten years.

- All strata, except Large Academics, report a majority of their ILL requests are filled in-state; 87.7% for Other Academics (30% was the lowest observation); 74.2% for Large Publics (40% was the lowest observation); 67.2% for Regional Libraries (2% was the lowest observation); 91.3% for Other Public Libraries (40% was the lowest observation); and 67.8% for State Libraries (50% was the lowest observation). ILL requests issued from participants during the survey were to in-state locations for 43.9% of the Large Academic requests; for 72.6% of the Other Academic Libraries; 71.5% of the Large Public requests; 82.2% of the Regional requests; 94.8% of the Other Public requests; and, 63.8% of the State Library requests.

- The lowest fill rates and the longest lag times were observed for borrowing requests which were sent to potential lenders because of ILL policy, and not due to the likelyhood the queried library would own the material.

E. Future Research and Recommendations

From the data collected for these studies, a few observations can be made about the need for further research into areas upon which this report is based:

- The dependence upon original cataloging exhibited in Other Public Libraries warrants further appraisal, especially when weighed against the high utilization among these libraries of cataloging-in-print (CIP).
- The variables involved in cataloging costs including source of cataloging, size of library, volume and card to title ratios, need further refinement and evaluation of their impact upon costs.
- The "U-shaped" cost curve observed in cataloging needs further clarification and study; the reasons for higher cost observations in larger and smaller strata are different including "quality "and perhaps, inefficiency among the larger libraries, and start-up costs for small batches at the smaller libraries; however, no clear definitions of these variables exists, and, thus solutions (which are necessarily different for either end of the scale) can not be easily forwarded.
- Further research into interlibrary loan should include "total system" costs (to lender, borrower, and intermediaries) to assess the most efficient and cost-effective interlibrary loan networking configuration as opposed to single institution assessment.
- Planning for the role that the bibliographic centers will play in interlibrary loan as automated systems supplant the present level of need for union catalogs maintained by these centers is an immediate requirement.

The areas of needed research in library and information science are endless and dynamic. Many concerns have been forwarded during the course of this project. The reader is directed to the following sections of this report, and earlier reports of this project, for the major potential research endeavors suggested by the work conducted throughout these studies.

One of the earliest concerns fostered by these studies was the lack of comparable and consistent data available from libraries and from state data collecting agencies. For this reason, the Western Interstate Library Coordinating Organization (WILCO), with funding from the United States Office of Education is presently developing an on-going standardized statistical data base system for library planning. The statistical data base will offer a means of gathering, organizing and disseminating the kinds of data needed for resources allocation decisions and comparative analysis among libraries. The system, based on standardized data element and outcome measure definitions, is intended to (1) provide measures that can be used for comparative purposes within an institution and among institutions and (2) be a working system, with software and structure, which can model alternative outcomes from various resource allocation decisions, the impact of changes in resources in library service, and for all types of manipulation necessary for decision making. The system will be based on the data file structure and software developed by the National Center for Higher Education Management Systems (NCHEMS) which are used in over 800 post-secondary education institutions. Through this mechanism, it is hoped that the system will contribute to present library statistics through standardization of definitions, and measurement, and, thus avoid many of the barriers inherent in library survey data collection.

II. METHODOLOGY

A. Sample Design

The sample design used in the two stages of data collection was developed by Mr. Vernon E. Palmour of the Public Research Institute, Center for Naval Analysis. The stratified random sample weighted inclusion in the sample to larger libraries, of which costs and interlibrary loan and processing volume account for the highest percentage of the total library community in the West. The type of libraries included in the universe were:

> ACADEMIC LIBRARIES: A library which services a four-year university or college or a two-year junior college or community college and which meets the criteria for listing in the Higher Education Directory 1974-1975; excluding however, institutions which are for-profit, trade schools, exclusively graduate education, or highly specialized institutions such as seminaries, industrial schools, etc.
>
> PUBLIC LIBRARIES: A library that serves free all residents of a community, district, or region, and receives its financial support in whole or in part, from public funds.
>
> STATE LIBRARIES: A library maintained by state funds for the use of state officials, and sometimes for the use of all citizens of the state.

The inclusion of special libraries in the universe was also considered. Indeed, the special library sector represents a valuable resource in the western states, and must be considered in network planning. However, due to the varying purposes, processes and services of the special library, unique examination is required. This was beyond the scope of this study. School libraries were also considered as potential candidates for the survey. Many difficulties exist in such an examination due to the size of the universe and the diversity of library operation. Thus, investigation would have required expansion of the sample and study approach beyond the limits of this study.

A final exclusion made to the sample universe was based on size. Due to the great many public libraries in the western states and British Columbia (an estimated 1666 libraries at the beginning of this study), it was concluded that a lower limit should be established for inclusion in the sample. This measure would increase the confidence interval of the cost data collected from the public library strata. Since the simplest rule for such a limit is in volume holdings, this criterion was employed. In establishing such a limit, it was concluded that in no state should more than 50% of the public libraries be excluded from the universe. Using this method, a lower limit was set at 3000 volume holdings. By excluding all those libraries with less than 3000 volumes, the universe of public libraries was reduced to 1483 libraries.

Within the academic and public library populations, strata were partitioned according to size, and in the case of public libraries, according to function. These strata were:

> Large Academic Library: Institutions meeting the criteria for academic libraries, and whose volume holdings exceed 920,000.
>
> Other Academic Library: Institutions meeting the criteria for academic libraries and whose holdings do not exceed 920,000 volumes.
>
> Large Public Library: A public library, according to the definition above, and whose holdings exceed 800,000 volumes.
>
> Other Regional Library: A public library whose holdings do not exceed 800,000 volumes, and which serves, or houses a center which serves, a group of communities within two or more counties, and is supported in whole or in part by public funds from the governmental units served, or state funds for operations of the services to other communities.
>
> Other Public Library: A public library which does not fall under the definitions of large public library or other regional library, and whose holdings exceed 3000 volumes.

B. Case Study Purposes and Selection

Of the 100 libraries chosen through the sampling process, twelve libraries were asked to participate as case studies. The purpose of the case study was to gather more detailed data than could be accomplished through the survey mechanism. Selection of the twelve case studies was made on the basis of:

- stratum within the sample,
- geographical location,
- extent of manual operations, and
- willingness to participate as a case study.

One library in each of twelve states was selected for participation as a case study. The allocation of case studies across the strata of the sample were as follows:

Large Academic Libraries: 2 case studies
Other Academic Libraries: 3 case studies

Large Public Libraries: 1 case study
Other Regional Libraries: 2 case studies
Other Public Libraries: 2 case studies

State Libraries: 2 case studies

The original twelve case studies as indicated in earlier quarterly reports are not those represented in the final results of this study.

C. Sample Selection

Data in making the sample selections for the Large Academic and Large Public stratum according to sample design specifications were provided by the Library Surveys Branch, National Center for Education Statistics, U.S. Office of Education. In addition, these statistics were verified through the *American Library Directory, 1974-75* and state planning data submitted to this project by several of the western states. Additional data in support of selections for the Large Academic stratum was obtained from the Association of Research Libraries, *ARL Statistics, 1974-75*, wherever possible. In instances of discrepancy among these sources which might affect selection, the libraries in question were queried directly. Listings for the Other Academic Libraries stratum were created from the National Center Education Statistics, *Higher Education Directory, 1974-75*. Certain exclusions were made to these listings as noted earlier. Listings for Other Regional Libraries stratum were provided by the planning data submitted by the states and verified in the *American Library Directory*. Where planning data were unavailable, the state library was contacted for this information. Discrepancies in any other data were also clarified through the state library agencies. The variances of definition of a regional library between states were overcome by rigorous definition of this type of library: A public library servicing a group of communities in two or several counties, or a group of independent libraries in two or more counties. Listings for the Other Public stratum were drawn from a combination of the *American Library Directory* and published state statistics. Differences between these sources were resolved by either the state library agency or by the subject library. This listing was the most difficult to compile due to the magnitude of the universe and the obstacles in comprehension and accuracy.

During the survey, it was discovered that at least one large public library, after a recent inventory of the collection, did not meet the holdings criterion. However, as one large public participant commented, without an accurate inventory, holdings counts are purely estimates. Thus, it was concluded for the Large Public stratum, most participants would indicate equal reductions in collection size on a percentage basis as the single participant conducting a recent inventory. Therefore, no adjustment was made for this case.

The original sample design allocated the 100 selections across strata in the following manner:

	Strata	Size of Universe	Size of Sample
ACADEMIC LIBRARIES	Large	20	20
	Other	478	21
PUBLIC LIBRARIES	Large	10	10
	Other Regional	66	10
	Other Public	1298	22
STATE LIBRARIES		17	17

The rate of negative responses to the letter of invitation were to alter these sample sizes somewhat. However, in accordance with the original intentions of the sample design, and consistent to the original goals of the survey, weighting towards the larger libraries, and those with higher likelihood of dense interlibrary loan volume was imperative. Further, equal numbers of academic and public libraries were asked to participate in the survey.

First drafts for the survey were selected according to the sample outline. Changes to the sample design were necessary during the invitation process. These changes were indicated when a full complement of participants could not be obtained within the large academic and state library strata (i.e. the entire universe was included in the sample and there were no replacements thus available). Six libraries within these strata (four large academic libraries and two state libraries) were unable to participate. The six positions were, then, reallocated across other strata. These were evenly divided between academic and public libraries to maintain the even balance of the original sample. This outcome did not occur within the large public stratum, since the sample selection included replacements (fourteen libraries were invited to participate).

Adjustments to the sample, due to additional changes during the invitation process, altered the sample and proportions to the following:

Strata	Sample Size	Proportion to Universe
ACADEMIC LIBRARIES		
Large	16	.8
Other	26	.05
PUBLIC LIBRARIES		
Large	11	.79
Other Regional	10	.15
Other Public	22	.02
STATE LIBRARIES	15	.88

D. Survey Management

Invitations were issued to the original sample of 100 libraries on March 1, 1976. The original character of this sample allocated across the 17 western states and British Columbia appears in Table I, Appendix B. Table II, Appendix B, details the response rate to this first invitation according to stratum. As is apparent in this table, affirmative response rates were lowest in the Other Academic and Other Public strata. Reasons given by declining libraries included limited manpower to complete such a survey or limited size which would not be exemplary of the stratum. Further, several declining institutions participated in central processing cooperatives and, thus, believed information necessary for the survey would not be available. As is reflected in Tables III and IV of Appendix B several iterations were necessary to achieve a full sample of 100 libraries for participation in the Survey of Costs in Technical Processing and Interlibrary Loan. Some attrition also took place after issuance of the questionnaire. A total of 194 invitations were issued. In order to secure responses, all invited libraries were contacted by telephone, where possible. Additionally, the assistance of the state librarians in many of the western states was solicited. This proved particularly helpful in guaranteeing the participation of the smaller public libraries.

In addition to the survey of costs, invited libraries were asked to participate in a survey of their interlibrary loan traffic for a three-week period. This was an optional participation for all surveyed libraries, but required of the 12 case studies. Those libraries participating in this survey are listed in Appendix C.

Table V of Appendix B details the sample as finally constituted across the 17 states and British Columbia. A complete list of the participating libraries appears in Appendix C.

Of the final survey participants, 76% completed the survey instrument in time for inclusion in the final report. These libraries are noted with a star (*) in Appendix C. In completing the survey instrument, responses to questions which could not be answered accurately (but for which adequate estimates could be given) were enclosed in parenthesis to indicate estimates. For purposes of analysis, these estimates were included.

In instances where participants had difficulties in completing the survey, project staff could be contacted for clarification. Questions were generally about unique local practices. However, in some cases, the difficulties arose over interpretation of data elements and definitions.

Each survey instrument was reviewed by project staff upon receipt. Incomplete or conflicting data were clarified in either follow-up telephone calls or follow-up letters. This proved an effective mechanism in quality control. All keypunched data were verified to insure accuracy.

For the case studies, the employment of a site visit counteracted many of the difficulties which arose in the survey. Problems of data collection could be clarified and discussed during that time.

All data supplied for the survey are considered confidential. Individual library results will not be released by WICHE unless authorized by the participating library. All results of the survey were provided to participating libraries. Each participant was urged to maintain copies of the completed form to compare results of the survey with individual responses.

E. Survey Data Collection

The purpose of the survey instrument was to focus on those cost areas which would ultimately be affected by network service support. The instrument was also designed to incorporate data elements that would yield information on patterns of cooperation, regional resources, and the impact of present levels of network development. The survey instrument has three parts:

General

I. Structure: An examination of the general structure of the library, including the number of branches and bookmobiles maintained by the library and the library cooperatives to which the participating library may belong.

II. Holdings: Volumes and titles represented in the library's holdings, growth of collection, types of materials held, and participation in a union catalog or list are the focus of this section.

Costs

III. Staff: The subject of this section is staffing patterns and total salary expenditures by the library in technical processing and interlibrary loan, as well as administration.

IV. Processing and Reference Support: An examination of the support services and products which the library uses to increase volumes processed.

V. Equipment, Communications, and Related Supplies: The focus of this section is upon copying equipment and communication equipment, supply and communications costs.

VI. Current Year Budget: A breakdown of the library budget into categories of costs according to the departments which are subjects of this survey, including those costs examined in Sections IV, V, and VI is requested in this section.

Volume Data

VII. Regional Libraries, Regional Resource Centers, and Centralized Processing Agents: This section is directed to those libraries in the survey who provide services to other libraries. Specifically requested are the services provided and the reimbursement the library receives for these services.

VIII. Acquisitions: This section examines the characteristics of the current acquisitions of the library and the corresponding statistics.

IX. Cataloging: The subject of this section is the characteristics of cataloging throughput and the corresponding statistics.

X. Interlibrary Loan: This section pertains to interlibrary loan functions, both borrowing and lending, and the relevant data on interlibrary loan patterns.

From completed instruments, those data elements which would necessarily need revision in the event the questionnaire was refielded have been detected. Primary difficulties occurred in holdings counts, the determination of FTE (full-time equivalencies), allocations of staff across functional areas (e.g., acquisitions, cataloging, etc.) and consideration of regional support given by state and regional libraries to which the instrument is addressed. Without a customized data collection instrument directed to an individual library, local peculiarities are not adequately addressed. This shortcoming is inherent in any instrument designed for survey use. In the instrument design, one of the major concerns was to maintain an adequate balance between specificity and generality. Due to the varying characteristics, and the diverse procedures of each of the libraries participating in the survey, addressing each and every unique operational area was impossible. However, we attempted to address those particular issues that might affect cost. One should keep in mind the importance of maintaining comparability in a survey of this size. However, this insistence upon uniformity of data elements overlooks the wide variances in operations a particular library may have. We were able to accommodate wider ranges of variances in the case studies because of the separate analysis received by each library.

In future use of the questionnaire, WILCO intends to revise and correct those difficulties which are soluble. Additionally, by tailoring the questionnaire for a particular stratum or a particular segment of the library universe, certain of the drawbacks presented by survey use can be avoided. A subsidiary benefit of the questionnaire was the change in statistics-keeping by several participating libraries who determined data presently collected was inadequate and that the survey had provided them with some valuable insights into data requirements.

In designing the questionnaire, utmost consideration was given to maintaining consistency with other library data collection endeavors. Thus, the questionnaires used by the Library General Information Survey (LIBGIS) and the Higher Education General Information Survey (HEGIS), as well as the data presently collected by the state agencies of the West, were scrutinized for possible utilization. Wherever possible, conformity to the data elements used by these agencies was preserved. Discrepancies occurred only where it was necessary to gather a different type of count for estimation of workload and concommitant staffing requirements.

F. Case Study Data Collection

Each case study was required to complete the In-Depth Case Studies in Technical Processing and Interlibrary Loan questionnaire which is a lengthier version of the survey instrument discussed in the previous section. Additional detail required of the case studies included salary information, building facility overhead, and procedural data. Also each of the twelve case studies collected data on staff time and volume throughput in technical processing and interlibrary loan over a three-week period. The instruments used in this data collection were:

> Acquisitions Activity Sheet: A log sheet maintained by each staff member involved in acquisition functions to monitor time spent on 29 specified activities and the volume throughput of each activity.

Cataloging Activity Sheet: A log sheet maintained by each staff member involved in cataloging functions. Fifteen specific activities and the volume throughput for each were monitored.

Serials Activity Sheet: A log sheet maintained by staff members involved in the processing of serials. Twelve specific activities and the volume throughput for each were monitored.

Interlibrary Loan Activity Sheet: A log sheet maintained by staff members involved in ILL activities. Twenty-five activities, divided among borrowing and lending tasks, have been specified for tracking staff time and volume throughput.

These activity sheets and the corresponding list of task definitions appear in Appendix D.

Many of the activities were selected for inclusion in these activity sheets due to their likelihood of being impacted by network services. Thus, activities are not comprehensive, but limited to the focus of our study. Within technical processing and interlibrary loan, the definitions of the activities do not necessarily provide a full scope of the sub-tasks involved in the activity. The activity sheets are designed to provide a platform upon which each library could base the data collection. The instruments were intended to be as flexible as possible in order to accommodate the local procedures of any library participating as a case study. For this reason, adaptations to the instruments were made in the field in order to adequately reflect the activities of the individual library. In this manner, the instrument could be used to accurately portray the staff allocations to processing activities, without requiring staff members of the library to conform to the activities of the instrument. By allowing for this degree of freedom in the use of the activity sheets, we hoped to avoid skewing the data collected.

A site visit of each of the case studies was conducted for this project. The purposes of these site visits were to inform staff of the objectives of the study, resolve beforehand any problems that might arise during data collection, and instruct staff in data collection procedures. The technique of the site visit served remarkably well in upgrading the quality of the data collected and in diminishing the need for further clarification. At each of the site visits, the staff members of technical processing and interlibrary loan were able to suggest potential revisions to the instruments and indicate activities that were not included in the instruments. For instance, in the Interlibrary Loan Activity Sheet, the borrowing task of searching the library catalog was inadvertantly omitted. Additionally, many of the library staff felt the categories were too large and should be broken into sub-tasks. There were compliments on the format and on the thoroughness of the activity lists within the instruments. The site visits, thus, provided the project with a clearer awareness of the strengths and weaknesses of the activity sheets and provided directions necessary for future revision.

Due to the general nature of the survey, data collected from the case studies provide detail on expenditures to subactivities within technical processing and interlibrary loan. From this information, then, a clearer idea of the flow of costs within particular areas can be derived.

Each case study received for its participation a stipend of one hundred dollars ($100). Additionally, each case study received the analysis of its data for planning, costing or management use.

G. Data Processing

The various computer facilities available for this project were evaluated. Due to the magnitude of data to be processed for these studies, cost and time factors were of major consideration in this evaluation. It was decided to utilize the United Airlines (UAL) twin IBM S/360 Model 195's, located at the UAL Denver Technical Center. This is an on-line reservation system for which computer time is sold on the back-up machine at competitive prices. Under the auspices of the National Center for Higher Education Management Statistics (NCHEMS) of the Western Interstate Commission for Higher Education a RJE (Remote Job Entry) facility, including CRT terminal, printer and card reader, is located in the WICHE building. Due to the ease of access and reasonable pricing schedules offered for use of this computer, the UAL system was selected.

All programs for the analysis of survey and case study data were designed by Ms. Anita McHugh of WILCO. Originally, it was believed that packaged programs would be suitable for the needs of the study. However, due to the volume of data and specifications for output, the use of available programs proved infeasible. Programs developed by WILCO are documented in the *Costs in Technical Processing and Interlibrary Loan--Data Processing User's Manual*. Data was stored on a 3330 disk for the duration of the data processing. At the completion of the project, the data was copied onto a 1600 BPI tape for ready access and reference in the future.

Analysis output tables for the Survey of Costs in Technical Processing and Interlibrary Loan derived from the data collected via the survey include the following types of information:

a. Holdings Distribution: by type of holding (i.e. bookstock, periodicals, etc.) showing the average number of titles, volumes and volume-to-title ratio and growth in holdings.

b. Staffing Distribution: by type of employee (i.e. professional librarian, library assistant, etc.) for the entire library, showing average number of FTE, salaries, salary per FTE and fringe benefits.

c. Processing and Reference Support: a list of library functions which are wholly or partially done outside the library (e.g. bibliographic center support for ILL) showing the average annual volume, annual cost and cost per volume.

d. Unique Computer Support: a list of computer systems in use by the 100 survey libraries, showing the cost of development, annual average costs, functions the system handles and the library priority.

e. Equipment and Communications Costs: showing the average annual cost of copying and communications equipment (i.e. Telex, teletype, CRT, telephone, etc.)

f. Budget and Expenditure Patterns: a list of budget categories (i.e. staff, materials, etc.) showing average budget, increase over last year's expenditures and percentage allocated to administration plus the four departments under study.

g. Regional Library Summary: a series of tables showing
1) the types of services provided by regional libraries;
2) the characteristics of interlibrary loan traffic (i.e. filled requests, forwarded requests, etc.);
3) regional catalog size; and,
4) the characteristics of reimbursement for regional services.

h. Acquisitions: a series of tables including departmental budget patterns and staffing distribution for the entire library plus tables showing characteristics of ordering (e.g. type of material, standing order, gifts, retrospective collection development, etc.)

i. Cataloging: a series of tables including departmental budget patterns and staffing distribution for the entire library plus tables showing cataloging patterns, cataloging source information,lag time and backlog.

j. Interlibrary Loan: a series of tables including departmental budget patterns and staffing distribution plus tables showing
   1) average success at filling interlibrary loans;
   2) time to fill a loan from various sources (e.g. local source, or a bibliographic center); and,
   3) characteristics of filled requests.

Resultant tables appear in Survey Tables and Case Study Results.

III. GENERAL PROFILE OF THE SAMPLE

The sample design (explained in Section II) employed in this survey required the following construction of strata:

	Number in sample	Results included from	Number in universe (estimated)
Large Academic Libraries	16	10	20
Other Academic Libraries	26	18	478
Large Public Libraries	11	11	0
Other Regional Libraries	10	10	66
Other Public Libraries	22	17	1298
State Libraries	15	10	17
TOTAL	100	76	

Even employing the stratified sample segregations, results show wide variances within each stratum. These differences among participating libraries prohibit definitive conclusions from the collected data. In order to place the findings in perspective, a summary of each stratum follows.

The ten large academic libraries participating in the survey of costs in technical processing and interlibrary loan were distributed among 6 western states and British Columbia. Holdings of bookstock averaged 1,290,306 with a range from 473,437 volumes to 2,040,000 volumes. Titles averaged 744,104 (with a range of 378,750 volumes to 980,000). Bound periodicals (reported by only three of the participating libraries) ranged from 167,377 volumes to 254,928 volumes. Growth in both types of materials over the past five years averaged 6% per year. Books on microform accounted for an additional 1,147,146 titles (average of four libraries reporting).

Other areas of collection indicated the following averages:

Printed government documents, 446,328 titles
(eight libraries reporting)

Audio-visual materials, 139,861 titles
(eight libraries reporting)

Other materials, 137,266 titles
(three libraries reporting).

Professional librarians (averaging 60 FTE with a range from 35 to 103) and library assistants (averaging 107 FTE with a range from 35 to 299) formed the highest percentage of staffing. Other categories of employee and relevant averages include:

Other professional, 2.5 FTE (eight reporting)
Clerks, 27 FTE (nine reporting)
Student/pages 54.7 FTE (nine reporting)
Other, 3.9 FTE (five reporting)
Staff paid by outside sources, 12.6 FTE (seven reporting)
Volunteers, .25 FTE (one reporting)

Overall, staff size averaged 253 FTE. This varies considerably from the staffing patterns of other academics, regional, and other public libraries. Salaries averaged a little above $16,000 annually for both professional librarians and other professionals. Annual salaries for library assistants, clerks and students/pages averaged $9220, $6755, and $5137,respectively. Other types of employees ranged considerably higher with average annual salaries of $10.349. Operating budgets varied from $1.4 million to $7.1 million averaging about $2,991,049. This represents an average increase of 10% over last year's expenditures. The major operating budget expenditure was salary and fringe benefits (on the average, 92% of the budget), at $2.74 million annually per institution. Salary increases accounted for nearly the total increase of current year budget over last year's expenditures. Materials budgets accounted for between $368,000 and $1,855,087 in expenditures, with an average of $1,224,067 or about 20% of the total annual budget (including capital expenditures). Eight of the reporting libraries indicated expenditures in automation.

Results of 18 other academic libraries are included in this report. Libraries in this stratum consisted of five universities, three colleges, and ten junior or community colleges, covering nine of the seventeen western states, with one library in British Columbia. The holdings of these libraries ranged from 13,139 volumes of bookstock to 693,387 volumes (with an average of 149,520 volumes representing 111,935 titles). Bound periodicals amounted to an average of 17,323 volumes with a range from ten to 87,530 volumes. Other categories of holdings included:

Printed government documents, 36,500 titles
(ten reporting);

Audio-visual materials, 9,233 titles
(sixteen reporting); and

Other materials, 3,801 titles
(five reporting).

Staffing patterns tended towards an even distribution of professional librarians, library assistants, clerks and student/pages (averaging 8 FTE, 8 FTE, 9FTE, and 9 FTE respectively). Other categories were also well represented, with an average of 1.5 other professionals, 2.4 other employees, 4.3 FTE paid by outside sources and 3.5 FTE volunteer. Salaries for professional librarians, as in Large Academics, exceeded $16,000 annually, while salaries averaged just above $15,000 for other types of professional. For library assistants the salary was higher than that of similar positions in large academics, averaging $10,697 annually. Similarly, clerical assistants received higher annual salaries, averaging about $8,000. Other types of employees received on the average, a salary of $9,547 annually, while students/pages earned on the average only $4,739 annually (somewhat below their counterparts in Large Academic Libraries). Operating budgets (excluding capital expenditures and materials budgets) varied from $32,985 to $1,637,323, averaging $343,423 budgeted for the current year. Salaries and fringe benefits accounted for ninety percent of these budgets. Material budgets ranged between $18,000 and $591,893, or about 26% of the total library budget. Only one library reported investments in automation.

Of the eleven Large Public Libraries included in these survey results, seven are in California, with the remaining four libraries scattered among three states. Combined holdings of bookstock and bound periodicals averaged 1.5 million volumes. The range of volumes for bookstock alone were from .6 million to five million volumes, representing 149,100 to 634,920 titles within the eleven libraries. Other counts included the following averages:

> 13,794 titles on microform (representing the average holdings of nine reporting libraries);
>
> 416,307 titles within government documents (six libraries reporting);
>
> 31,071 audio-visual titles(reported by nine libraries); and
>
> 58,437 other titles(reported by six libraries).

Staffing patterns reflect those of the large academic libraries with a concentration of professional librarians averaging 106 FTE, and of library assistants, averaging 96 FTE in eleven libraries reporting. Among other categories of employees, the following averages were observed:

Other professionals: 9.15 FTE (ten libraries reporting);
Clerks: 85.28 FTE (ten libraries reporting);
Students/Pages: 35.78 FTE (ten libraries reporting);
Other paid employees: 14.7 FTE (nine libraries reporting);
Staff paid by outside sources: 51.22 FTE (ten libraries reporting);
Volunteers: 1.42 FTE (five libraries reporting).

Operating budgets averaged $5.6 million (ranging from $3 million to $19.6 million). Unlike previous strata, salaries and fringe benefits accounted for only 79% of the operating budget. Salaries were somewhat less generally than among academic libraries. Professional librarian salaries averaged fifteen thousand dollars annually, while other professionals received about $12,531 on the average. The average salaries for other types of employee ranged from $6466 for student assistants to $8950 for library assistants. Materials budgets for large public libraries ranged from about .5 million to 2.5 million dollars annually with an average of $873,091, accounting for about 13% of the annual budget. Six libraries reported expenditures in automation.

Other Regional Libraries were defined as public libraries whose holdings did not exceed 800,000 volumes and which served (or housed a center which served)a group of independent communities or libraries within two or more counties and is supported in whole or part by served governmental jurisdictions or by the state. Ten regional libraries were included in this survey, covering seven states. All results from participating regional libraries are incorporated into this summary. Volume holdings of bookstock ranged from 33,700 to 355,000, averaging 199,729 volumes and representing an average of 96,795 titles. Growth over the past five years indicates a five percent increase in volumes, while only a three percent increase in titles. Other relevant averages in holdings include:

1,731 volumes of bound periodicals, representing about 39 titles (five libraries reporting);

95 titles of bookstock on microform (one library reporting);

764 titles of periodicals on microform (seven libraries reporting);

26,916 titles of government documents (three libraries reporting);

4,614 titles of audio-visual materials (nine libraries reporting); and

8,825 titles or other materials (four libraries reporting).

Staffing was remarkably concentrated in library assistants (averaging 15 full-time equivalencies) and clerks (averaging 17 full-time equivalencies), for the nine libraries reporting these positions. Of the ten regional libraries reporting, an average of seven professional librarian positions were observed. Remaining employee types ranged from .83 FTE Other Professional positions (reported by three libraries) to 4.17 FTE Student Assistants (reported by eight libraries). Overall salaries were less than those observed in previous strata with the following averages:

Professional librarian: $11,848 per year;
Other Professional: $11,050 per year;
Library Assistants: $7,817 per year;
Clerks: $6,068 per year;
Students/pages: $4,386 per year; and
Other: $8,523 per year.

Fringe benefits for each category of employee averaged between fifteen and seventeen percent of total salary, with the exception of student/pages where the fringe benefit rate averaged nine percent. Operating budgets ranged from $40,637 to $1,035,059 in the ten regional libraries and averaged $465,295. Eighty-six percent of this can be accounted for by salaries and fringe benefits. Only one library noted expenditures in automated systems. Materials budgets in the ten libraries ranged from $5,000 to $327,072 averaging about $101,345, or about 17.6% of the total library budget.

Seventeen other public libraries reported survey results in time for inclusion in this report. These libraries represent nine states and range in size from 6,360 volumes to 773,959 volumes of bookstock within 16 libraries (ranging from 5,260 to 292,675 titles). Other materials held by these libraries averaged:

88 titles of bound periodicals (reported by ten libraries)
68 monograph titles on microform (reported by three libraries)
500 periodical titles on microform (reported by seven libraries)
55,775 government document titles (reported by six libraries)
33,987 audio-visual titles (reported by sixteen libraries), and
34,779 other titles (reported by eight libraries).

Average staffing patterns indicate an almost even mix of all types of employees, with the exception of other categories (other professional and other employees). These ranges varied from 7 FTE reported for professional librarian positions and clerks, through 8 FTE for staff paid by outside sources and nine FTE for library assistants, and student/pages. Volunteers averaged five FTE in three libraries indicating this type of employee. Other types of employee were observed to be, on the average, about 1.25 FTE (both other professional, reported by three libraries, and other, reported by two libraries.) Salaries averaged higher than those reported in other regional libraries. Professional and other professional positions averaged an annual salary of $13,948. Library assistants were near the $10,000 mark, and clerks averaged about $9,000 in annual salary. Students/pages averaged an annual salary of $7,071 the highest observed average of any of the strata for this category of employee. Operating budgets ranged from $8,663 to $2.6 million, within the fifteen reporting libraries. On the average, 92% of budgeted allocations went to salaries and fringe benefits. One library indicated expenditures in automated systems. Materials budgets for fourteen reporting libraries accounted for between $2,143 and $491,980, averaging about $55,182 annually. Materials budgets, then, accounted for an average of about sixteen percent of the total library budget.

Results from ten of the seventeen western state libraries are included in this report. These states are New Mexico, South Dakota, Arizona, Colorado, Idaho, Nevada, North Dakota, Oregon, Washington and Montana. State library collections for the nine reporting holdings information varied from 2,000 volumes to 598,004 volumes of bookstock averaging 191,618 volumes. Other holdings exhibited the following averages:

Bound periodicals: 18,895 titles (five reporting);
Monographs on microform: 5,226 titles (four reporting);
Periodicals on microform: 2,984 titles (five reporting);
Government documents in print: 287,751 titles (nine reporting)
Audio-visual materials: 16,211 titles (eight reporting), and;
Other materials: 14,268 titles (four reporting).

Staffing concentrations among the state libraries appeared to be clerical staff, with an average of twenty FTE reported by ten state libraries. Professional librarian staffs averaged sixteen full-time equivalencies (ranging from six to forty-one FTE), reported by ten libraries. Library assistant staffs averaged ten FTE. An average of three FTE of other professionals were reported by nine state libraries, while only four libraries reported other categories of employee, averaging three FTE. Seven state libraries reported student/page positions (averaging two FTE apiece). Salaries for all professionals within state libraries averaged about$14.7 thousand per year, while other employee salaries were considerably lower. Library assistants averaged $8376 and clerks, $7276 annually. Student/pages receive on the average $5,486 annually, while other types of employee earn about $4,714 per year. State library operating budgets averaged $839,809, ranging from $422,800 to $2,693,337. Of this, 69% was made up of salaries and fringe benefits. Within the ten state libraries reporting, materials budgets ranged from $40,150 to $710,605, averaging $175,641 or seventeen percent of the total library budget. Three of the ten libraries reporting indicated expenditures on automation.

In examining general data from each of the strata, few conclusions can be drawn. Examining particularly the correspondence between automation and labor requirements, table 1, summarizes these variables by stratum. Support services were defined for the purposes of this survey as services or products procured by the library, and systems developed for the library, which increase cost-efficiency, increase throughput (volume processed), supplant in-library tasks, etc., such as pre-processing, automated cataloging systems, printed card sets, and automated buying.

Table 1. Measures of Labor Intensity by Stratum

Type of Library	Number reporting automation purchase	Number reporting other support service purchases	Average % of operating budget devoted to salaries & fringe ben.	Professional librarian to other paid employee ratio
Academic				
Large (10)	8	6	92%	.32:1
Other (18)	1	7	90%	.38:1
Public				
Large (10)	6	5	79%	.47:1
Region. (10)	1	4	86%	.22:1
Other (15)	1	5	92%	.50:1
State (10)	3	7	69%	.44:1

It is apparent from this table that the proportion of general library budget allocations given labor is not clearly affected by the purchase of automation, nor support services. Nor, however, does the ratio of professional librarians to other labor types affect the salary proportion of operating budgets.

IV. ACQUISITIONS

In order to accurately assess the acquisitions data, provided by this survey, the reader should be aware of the varying responsibilities associated with the acquisitions department among libraries. The inclusion of such tasks as selection of materials, serials acquisitions, precataloging search, and even, added copy/added volume routines, is a matter of local policy and option. The nature of the survey was such that these variations are not picked up. Acquisition data required for the survey included:

- budgeting and expenditures,
- staffing patterns,
- purchasing patterns, and
- characteristics of throughput.

A. Throughput statistics

The reader should be aware that there may exist discrepancies in reporting among libraries. For example, in some instances, multiple copies processed through acquisitions may be counted as a single title or several titles, depending on the method of statistics-keeping at the participating library. Given the state of standardization of holdings counts, there was no way to eliminate these possible discrepancies. Among the strata, and among libraries within a single stratum, data differ significantly. As Table 2 demonstrates, the average acquisition title throughput of the strata is widely scattered, ranging from 2,138 titles (in other public libraries) to 44,399 titles (in large academic libraries).

Significant in Table 2 is the pattern of acquisition expenditures (excluding materials costs) per title throughput. Public libraries exhibited a decline in unit costs as throughput declined, ranging from $2.22 (in other public libraries) to $3.69 (in large public libraries). This narrow range for acquisition unit costs is particularly remarkable when weighed against comparable ranges in cataloging and serials processing.

Table 2 - Annual Title Throughput - Acquisitions

Type of Library	Average Annual Title Throughput			Acquisitions Expenditure Per Throughput
	Monographs	Serials	Total	
Academic				
Large	37,552 (10)	7,608 (9)	44,399 (10)	$ 4.84 (9)
Other	7,166 (16)	684 (13)	7,722 (16)	$ 5.20 (11)
Public				
Large	27,234 (10)	3,262 (8)	29,843 (10)	$ 3.69 (7)
Regional	5,683 (8)	250 (4)	5,808 (8)	$ 2.99 (6)
Other	2,052 (11)	159 (6)	2,138 (11)	$ 2.22 (12)
State	8,588 (9)	568 (7)	9,030 (9)	$ 2.33 (7)

Numbers in parenthesis indicate the number of libraries reporting non-zero data.

B. Expenditures

Expanding on the expenditure patterns in these acquisitions departments, we find in Table 3 that the majority of costs are comprised of salary and fringe benefit expenses. This may be misleading, however. The finer expenditure categories of equipment, communications, and supplies are often elusive costs combined with general library expenditure information and cannot be broken out by department. Even in cases where costs other than salaries are known, a high percentage of these other costs fall into categories which were not singled out in the survey. Overall, we find that acquisition expenditures per title acquired were more related to type of library than to factors of size or throughput. The closely distributed unit expenditures noted among public and state libraries is considerably less than the $4.84 observed in Large Academics, and the $5.20 observed in Other Academics. It is assumed that the unit expenditures noted in Other Publics would more closely approximate those observed within other public library sectors if thorough accounting of costs (beyond salary information) could be supplied.

Table 3. Acquisition Expenditures per Throughput.

Type of Library	Average expenditure per throughput by type of expense							
	Acq. Operating Budget	Salaries and Fringe Benefits	Automation	Other Support Services	Equipment Rental	Communications	Supplies	Other
Academic Libraries								
Large	$ 4.84 (9)	$ 4.74 (9)	$ .19 (2)	$ .10 (3)	---	$ .03 (3)	$ .09 (5)	$ .01 (1)
Other	5.20(11)	4.09(11)	---	.32 (2)	---	.02 (2)	.58 (8)	1.55 (4)
Public Libraries								
Large	3.69 (7)	3.27 (7)	---	.19 (1)	.05 (1)	.02 (2)	.15 (3)	1.02 (3)
Regional	2.99 (6)	2.93 (6)	---	---	---	.04 (2)	.06 (4)	.17 (1)
Other	2.22 (2)	2.22 (2)	---	---	---	---	---	---
State Libraries	2.33 (7)	2.11 (7)	---	.10 (2)	.01 (2)	.02 (2)	.07 (2)	.24 (2)

Numbers in parentheses indicate the number of libraries reporting non-zero data.

C. Staffing Patterns

Table 4 shows the salary/expenditure per throughput and throughput per full-time equivalency (FTE) observed in acquisitions. Also considered is the ratio of professional librarians to other types of employee exhibited in acquisition departments. Staff paid by outside sources, and volunteers were excluded from consideration in these ratios. In order to determine whether in-house automation, or services procured from vendors or networks for acquisitions impacted these measures, the number of libraries reporting such support are included in Table 4. Support services were considered to be any service procured, purchased or provided to the library which supplanted in-house tasks, reduced staff requirements, or enhanced cost-efficiency. These services include pre-processing, cooperative cataloging networks, production of cataloging records (e.g., book catalogs, printed cards, etc.) and automated buying systems. Support services may include automation; however, these services are distinguished from in-house automation which is unique to the library, designed particularly for the participant by a system designer, the staff of the library, or the parent institution and maintained by the library, parent institution, or system developer. As can be expected, Large Academic Libraries report the highest levels of combined automated and support service for acquisitions. Whether this level of support affected any unit cost reduction in acquisitions is unknown; however, the reader is reminded of the lower unit cost reported by Large Academics as compared to Other Academic Libraries in Table 3.

Immediately notable from Table 4 is the difference in salary expenditure per throughput noted in this table from the similar figure in Table 3. This is due to the exclusion of fringe benefits from the following table. This exclusion has reversed the expenditure pattern noted among academic strata, and between Regional and Other

Public Libraries. Predictably, and obvious from the data, salary expenditures per throughput are inversely related to throughput per FTE. It would appear, however, that the professional ratio has little bearing on either of these variables. This is evidenced most clearly in the Regional Library sector where an average of 38% of the acquisition staffs was professional (the highest observation) with a cost of $2.95 per throughput (the second lowest average cost report).

Table 4. Support Services and Staffing -- Acquisitions

Type of Library	Number of Libraries Reporting		Throughput (in volumes) Per FTE	Salary Expenditure Per Throughput*	Professional to Other Employee Ratio
	Automation	Other Support Services			
ACADEMIC LIBRARIES					
Large (10)	4	4	2,010 (10)	$ 5.16 (10)	.21:1 (10)
Other (18)	1	3	2,477 (14)	$ 4.07 (14)	.27:1 (13)
PUBLIC LIBRARIES					
Large (11)	3	4	3,383 (9)	$ 3.23 (9)	.12:1 (10)
Regional (10)	0	2	3,507 (8)	$ 2.95 (8)	.60:1 (7)
Other (17)	0	1	3,488 (2)	$ 3.26 (2)	.06:1 (4)
STATE LIBRARIES (10)	0	2	3,870 (9)	$ 2.72 (9)	.18:1 (10)

Numbers in parenthesis indicate number of libraries reporting non-zero data.
*Figures vary from Table 3 due to exclusion in fringe benefits and variance in the number of libraries reporting data.

D. Acquisition Patterns

Important to the understanding of the acquisition policies and practices of western libraries, the characteristics of acquisitions is worthy of examination. An underlying assumption in the initial stages of this project was that acquisition sources could have an impact upon the costs of acquisitions. For this reason, the following types of acquisition mechanisms were examined:

- Standing Order: Continuation or supplement of a work which the library has already ordered and is automatically received.
- Approval Plan: Materials received and reviewed by the library prior to purchase.
- Order Request: A specific title ordered individually from vendor or publisher.
- Gift/Exchange: An item or collection given to the library gratis, or for like-item or collection.
- Other: Any material received through other than the above means.

Participants were asked to estimate the percentage of materials received via the above means. Table 5 summarizes the results. Though all strata depend heavily on order requests (ranging from 54% of the acquisitions in Large Academics to 84% in Other Academics), both Large Academics and Publics receive sizable proportions of acquisitions through approval plan (21% and 19%, respectively). Indeed both large strata appear similar in ordering patterns. This information, combined with unit costs of acquisitions displayed in Table 4, suggests that ordering patterns are not as significant to costs as originally assumed.

Table 5. The Estimated Percentage of Monographic Titles Received by Varying Methods.

Type of Library	Estimated Percent of Monographic Acquisitions Received on:				
	Standing Order	Approval Plan	Order Request	Gift/ Exchange	Other
Academic Libraries					
Large (10)	7%	21%	54%	15%	2%
Other (14)	5%	3%	84%	9%	*
Public Libraries					
Large (10)	3%	19%	62%	10%	6%
Regional (8)	4%	6%	79%	3%	10%
Other (13)	3%	*	70%	18%	8%
State Libraries (10)	7%	*	82%	10%	2%
Overall (65)	4%	8%	72%	11%	5%

*Less than .05%

Number in parenthesis indicates number of libraries reporting.

Percentages do not add to 100% due to round-off errors.

Corrected from survey tables to reflect consistent reporting base including observations of zero percentages.

Looking at another facet of acquisitions, participants were asked to estimate the percentage of current acquisitions by imprint date (excluding retrospective collection development). An additional question in the survey was devoted to retrospective collection development. Unfortunately, several participants misunderstood the question, and the results were misleading. However, in examining current collection development, we find that results fall into divisional lines according to type of library. Public libraries concentrate most heavily on current publications while academic libraries (though collecting a majority of current publications) place added emphasis on materials published between 1969 and 1974. This may be in accordance with expectation, since public libraries historically concentrate acquisitions in current publications. State Libraries follow a similar pattern to that of academic libraries, approximating the percentages noted in Other Academic Libraries.

Table 6. Anticipated Acquisitions

Type of Library**	Percentage of Acquisitions (excluding retrospective collection)*		
	1975-1976 Imprints	1969-1974 Imprints	Pre-1969 Imprints
Academic			
Large (9)	61%	32%	7%
Other (14)	64%	28%	7%
Public			
Large (8)	82%	13%	4%
Regional (10)	82%	13%	5%
Other (10)	75%	18%	7%
State (10)	65%	25%	9%
Overall (61)	70%	22%	7%

* Corrected to reflect consistent reporting base including observations of zero percentages.

Numbers do not add to 100% due to round-off error

Number in parenthesis indicates number of reporting libraries.

E. Support Services

Support services and in-house automation were examined within acquisitions to determine the level, extent and possible impact of these services upon costs and throughput observed. Activities of particular interest within the survey as candidates for support included:

- searching for new titles,
- checking that new titles are not already owned, or backordered,
- producing orders, claim/cancel notices, or payments,
- encumberance of budgeted funds,
- producing new acquisition lists, and
- maintenance of acquisitions statistics.

Tables 7 and 8 document the results of this examination for Large Academic and State Libraries.

The level of support indicated by Large Academic Libraries, and presented in Table 7, should be weighed against the unit costs per throughput noted in Table 3, previously. As Table 7 indicates, the number of activities for which support or outside services are purchased seems to have relatively little impact on the costs as compared with other strata. However, exception should be taken for the fact that the survey did not attempt to collect cost information from a time prior to the introduction of these support services. The low throughput per staff FTE can be accounted for by the perhaps greater involvement in planned collection development of Large Academic Libraries, and unrelated to the amount of support purchased by the library. In-house computer support within acquisitions was reported by four Large Academic Libraries. Development costs for the two libraries reporting this information, ranged from $1,000 to $15,000. The cost of annual maintenance reported by the four libraries range from $7,615 to $131,000, averaging $40,021 annually. Of course, in many instances of such computer support, the parent institution is responsible for maintenance, and the costs reported are simply estimates used for internal accounting purposes. Thus, the completeness of such figures is open to question.

Table 7. Acquisition Support--Large Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Searching for New Titles to be Acquired	3	2	titles	33,000	$ 6,954	$ .21**
Checking that desired titles are not already ordered (backordered)	1	1	titles	300	*	*
Producing orders for materials	4	4	titles	46,325	$ 8,000 (1)	$ .17 (1)
Producing claim/cancel notices for backordered material	2	1	titles	3,500	*	*
Encumberance of budgeted funds for acquisitions	3	2	titles	6,100	*	*
Producing lists of new acquisitions for users	2	2	lists	1,046	$ 5,000 (1)	$ 2.40 (1)
Periodic statistics on numbers of titles acquired/ordered.	1	1	reports	12	*	*
Order status reporting	1	1	status changes	300,000	$12,000	$ .04

Number in parenthesis indicate the number of libraries reporting these data, if different from column (3)

* No information

**Higher estimate of $0.24 includes searching for cataloging data, producing cataloging copy and production of of catalog cards (included in the card set lease); additional costs include six cents for card costs (318,798 cards produced during last reporting year).

Fewer Other Academic Libraries report purchasing support for acquisition activities. It is difficult to determine whether this limited support is a factor in the high cost of acquisition operations within Other Academic Libraries. Three libraries report support service for the production of payments for vendors, while two libraries report support for pre-order searching and production of orders. The annual costs observed in these two institutions for pre-order searching was $4,000 and $250, respectively. The former indicated an average cost of $10 per title, which included the cost of checking that desired titles were not already held in the library or backordered. One library also indicated partial purchasing support for 1,532 titles at a cost of $4.24 per title. In addition, one library indicated unique computer support, maintained at an annual cost of $1,644. This is considerably less than the level of support indicated in Large Academics or Large Publics.

Large Public Libraries indicate a far broader and more extensive level of support than that of Other Academic Libraries. Unfortunately, little cost information was available on this acquisition support, which includes:

- checking that desired titles are not held (one library reporting)
- checking that desired titles are not already ordered (backordered) (three libraries reporting)
- producing orders for materials (three libraries reporting)
- producing claim/cancel notices for backordered material (three libraries reporting)
- encumberance of budgeted funds for acquisitions (three libraries reporting)
- producing payments for vendors or suppliers of ordered materials (four libraries reporting)
- producing lists of new acquisitions for users (three libraries reporting)
- periodic statistics on numbers of titles acquired/ordered (two libraries reporting)
- producing on-order/in-process lists (one library reporting)

Recalling the remarkable proximity of unit expenditures within the public library strata, we might attribute the notable efficiency of the Large Public Libraries to this support, coupled with the three libraries reporting acquisitions in-house computer support. Though no developmental cost information was available on these systems, the average annual cost was $27,495, ranging from $20,485 to $32,000.

Only two functions within Regional Libraries were supported through outside services. One library reported the production of new acquisition lists on a semi-monthly basis; however, no cost information on production of these lists was available. A second library indicated the practice of book renting, covering 880 volumes and including forty books per month. The average cost of this rental amounted to about $2.84 per volume. No unique computer support was indicated by any of the Regional Library participants.

Other Public Libraries do not report any procurement of outside services to support acquisitions, with the single exception of one library which indicates support for encumbering budgeted funds (no volume or cost information was available).

State Libraries reported the lowest expenditure per acquisition. As Table 8 indicates, outside support services procured for acquisitions were slight. Although only single observations were taken for most acquisition activities supported, we would assume that the processing center support noted by one library supports several activities both in acquisitions and in cataloging. No state library participant noted unique computer support for acquisition activities.

Table 8. Acquisition Support--State Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume
	Support	Data				
Producing orders for materials	1	1	titles	500	*	*
Producing claim/cancel notices for backordered material	1	1	titles	500	*	*
Producing payments for vendors or suppliers of ordered material	1	1	payments	1,040	$ 4,800	$ 4.62
Producing lists of new acquisitions for users	1	1	lists	174	$ 500	$ 2.87
Periodic statistics on numbers of titles acquired/ordered	1	1	reports	12	$ 35	$ 2.92
Standing orders to automatically receive materials	1	1	volumes	2,000	$ 23,950[1]	$ 11.97[1]
Processing Center support	1	0	*	*	*	*

* No information

[1] Includes the cost of materials

F. Case Studies in Acquisitions

The eleven case studies in technical processing present indicators of library patterns within selected areas. However, these case studies are not necessarily exemplary of the entire stratum from which they were drawn. Indeed, as the following tables imply, these case studies often magnify the differences existent within stratum, rather than the similarities.

An initial examination of the staffing characteristics observed in acquisitions during the three-week data collection interval underscores the variances between even similar types of libraries. Table 9 reflects the percentages of total time devoted to acquisition activities by types of library employee (i.e., professional, library assistant, clerk, etc.). Four of the case studies (numbers 1, 3, 5 and 6) reported no professional time devoted to acquisitions during data collection. Exception should be taken to at least Case Study #1, which does have professional staff within the department devoted to administrative tasks and trouble shooting. This time was not included in data collection. Among both Large Academic and State Libraries, a high percentage of total acquisition time was utilized by library assistants. The remaining strata, with the exception of Case Study #7 (15.3%), report no library technical support staff. Instead, many of the remaining libraries report a high percentage of clerical support staff for the acquisition function, ranging from 25.8% (Case Study #6) to 100% (Case Study #5). The reader should be aware that the designations of library assistant and clerk are often distinctions which are not made by individual libraries. For this reason, it may be unfair to draw any conclusions on the staffing differentials between these categories when the library indicates no such distinction. One Other Academic Library, Case Study #3, indicates 100% of the acquisition tasks were performed by an Other Professional employee (i.e., non-librarian).

The reader should note that particularly within technical services, which is often "seasonal," data collected during the three-week interval in acquisitions may not reflect general patterns; this is particularly true in smaller public and academic libraries. Keeping this in mind, the percentage of actual time devoted to activities which we have termed "production" activities is rather unpatterned. "Production" activities are all activities within acquisition except administration, supervision, correspondence, staff review, reports, budgeting, statistics, training, conferring with associates, professional development and meetings, telephone duties, coffee breaks or unassigned time. There are several inconsistencies in these data as reported of which the reader should be aware. The category was not uniformly used for activities such as statistics-keeping, or budgeting; these activities were often segregated into a separate and unrelated category by participants.

This occurrence may affect the percentage shown in the following table by inflating results above the actual "production" percentage. Further, in at least Case Study #1, professional staff time (which is devoted to administrative tasks) does not appear. This may reduce the "production" percentage for this case study, shown in Table 9. Again, a similar situation may occur in the smaller library participants, where no distinct acquisitions department exists (e.g., Case Study numbers 3, 6, 7, and 8), and administration may be handled elusively by professional staff. We find also that staff split between several major functions within the library (such as cataloging and acquisitions) could not easily prorate breaks, or other non-production tasks, to various functional areas. Certainly, for Case Study #3, where only 2.5 hours were noted in acquisition tasks, time for non-production activities could not be allocated. Case Study #2 employs an automated system which would not appear to dramatically impact the staffing characteristics of the acquisition function.

Table 9. Staffing Characteristics--Acquisition Activities--As Observed in 11 Case Studies

Case Study and Library Type	Percent of Total Acquisition Time Reported Spent By:						Percent of Total Time Spent In "Production" Activities**	Total Hours Reported
	Professional							
	Librarian	Other	Library Assistant	Clerk	Student Assistant/ Page	Other Employee Paid by Outside Source		
LARGE ACADEMIC								
Case Study #1*	0.0	0.0	74.7%	17.2%	8.1%	0.0	82.1%	1434.8
Case Study #2	18.6%	0.0	51.6%	26.1%	3.7%	0.0	76.7%	1304.5
OTHER ACADEMIC								
Case Study #3	0.0	100.0%	0.0	0.0	0.0	0.0	100.0%	2.5
Case Study #4	59.3%	0.0	0.0	27.5%	13.2%	0.0	64.1%	110.9
LARGE PUBLIC								
Case Study #5	0.0	0.0	0.0	100.0%	0.0	0.0	87.6%	712.4
REGIONAL								
Case Study #6	0.0	0.0	0.0	85.5%	14.5%	0.0	93.1%	67.6
Case Study #7	84.7%	0.0	15.3%	0.0	0.0	0.0	89.5%	155.9
OTHER PUBLIC								
Case Study #8	39.2%	0.0	0.0	25.8%	0.0	35.0%	77.8%	54.0
Case Study #9	9.7%	0.0	0.0	41.3%	49.0%	0.0	84.9%	271.7
STATE LIBRARIES								
Case Study #10	1.0%	0.0	58.9%	40.1%	0.0	0.0	89.7%	149.3
Case Study #11	3.6%	0.0	87.8%	8.6%	0.0	0.0	77.2%	112.4

*The time of the administrator of acquisitions is not included, thus it is assumed that column (1) is below actual, and that column (7), production percentage is somewhat inflated above actual.

**Excludes time spent in administration, supervision, peer consultation, professional development, meetings, breaks and non-task related activities.

Before turning to the costs of individual tasks as observed in the case studies, the reader is again warned that these observations are not necessarily typical of annual processing times, volumes and costs. Due to the fluctuations in throughput of the libraries, especially among smaller participants, work intensity and processing times may alter according to the period of year in which data are collected. Since our data collection was initiated near the close of the academic year, the data collected from the academics may be atypical.

Acquisition tasks have been divided into the following three groupings of activity:

- Selection and ordering: Title selection and review, approval plan processing, preparation of the order request card, preorder searching, assignment of vendor and fund, and the revision and signature of the purchase requisition.
- Follow-up activities: Sorting order forms, filing forms, encumberance or prepayment routines, unpacking and checking against the packing list received materials, notification of requestors, check-in invoices and prepare for payment, clearance of in-process files, and claims routines.
- Low-frequency activities: Gift routines, exchange routines, cancellations, returns, out-of-print routines, renewals and continuations, and work with an automated system other than preorder searching.

The designation of low-frequency activities was imposed upon activities which were of low volume, of infrequent occurrence during the year, or observed in only a few participating libraries.

In selection and ordering, we find a considerable variation in title selection and review, ranging from .3 minutes (in Case Study #5) to 6.78 minutes (in case study #8), both extremes appearing in public library strata. The immediate explanation for this wide range is the role which the acquisition staff assumes in title selection. For the most part, the major responsibility for title selection and review within the Case Studies falls outside of the acquisition department or staff. Instead, these duties are primarily handled by subject specialists, or subject departments. This assignment effectively limits the responsibilities of acquisition staff for title selection and review. Case Studies #8 and #10, in which acquisitions include title selection, report an average of 6.78 minutes and 6 minutes, respectively, per each title actually selected. These observations hint at the lengthy and costly title selection process. These data appear in Table 10.

Approval plan processing was only minimally observed during the data collection interval. The sampling of observations within public libraries are not significantly large to derive a valid assessment of approval plan processing. For Case Study #1, where 764 volumes were counted within this process, nearly two minutes per volume processed (including review and returns) was observed.

Preorder searching varies in extent with the library setting. For many libraries, the inclusion of precataloging search increases the sub-steps of this task, inflating average times and costs above those libraries which include only the search of ordering information. Further, as evidenced in Table 10, the amount of time spent for preorder search of a single title among Other Public Libraries is high. This may be a factor of low throughput coupled with the inaccessibility of bibliographic tools available to large libraries. We also find that the support of an automated system in preorder searching reduces the weighted unit times[+] for searching below that of similar type libraries (2.41 minutes, 1.32 minutes, and 2.32 minutes for Case Studies #2, #5, and #9 respectively). However, for material processed through both preorder searching processes, the times are comparable to those observed in manual systems (3.81 minutes, 2.06 minutes, and 4.48 minutes for Case Studies #2, #5, and #9 respectively). In Case Study #8, the volume of observations is not significantly high to warrant conclusions concerning system record searches.

[+] Weighted average time was calculated in the following manner:

$$\frac{(t_1 \times n_1) + (t_2 \times n_2)}{\max(n_1, n_2)}$$

where t_1=average unit time of preorder searching on a system;

t_2=average unit time of preorder searching manually;

n_1=throughput of system searching;

n_2=throughput of manual searching.

Table 10. Acquisitions--Selection and Ordering--Unit Times as Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Times (in Minutes) Observed in Case Studies For:								
	Title Selection and Review	Approval Plan Processing	Prepare Order Request Card	Preorder Searching		Assign Vendor and Fund	Prepare Order Record	Type Purchase Requisition*	Revise, Sign and Mail Requisition
				System	Other				
LARGE ACADEMIC									
Case Study #1	2.67(3229)	1.95(764)[1]	2.41(1183)[2]	---	3.58(2561)	.40(1029)	---	2.52(105)	.25(2382)[3]
Case Study #2	---	---	1.96 (713)[4]	1.84(2135)	1.97(9025)	.65(4388)[5]	1.52(2414)[6]	5.00 (25)	---
OTHER ACADEMIC									
Case Study #3	NO VOLUME THROUGHPUT REPORTED IN THESE FUNCTIONS								
Case Study #4	2.03 (558)	---	---	---	1.94 (330)	1.38 (73)	2.44 (270)	1.39(119)	---
LARGE PUBLIC									
Case Study #5	.30 (573)	4.00 (5)	.91(1061)	.51 (735)	1.55 (383)	.67(2307)	.18(2699)[7]	.60(2022)	.60 (184)
REGIONAL									
Case Study #6	NO OBSERVATIONS REPORTED FOR THESE FUNCTIONS								
Case Study #7	2.55 (697)	---	.61(1035)	---	2.41 (137)	.17(1035)	.72(1035)	**	---
OTHER PUBLIC									
Case Study #8	6.78 (146)	5.00 (3)	2.50 (6)[8]	5.83 (6)	7.50 (4)	3.88 (8)	---	10.00 (2)	3.13 (8)
Case Study #9	.39 (283)	1.67 (3)	---	1.18(280)	3.30 (97)	1.48 (27)	2.04(1061)	4.59(123)	.76(1135)[9]
STATE LIBRARIES									
Case Study #10	6.00 (15)	---	3.68 (117)	---	3.00 (5)	4.74 (19)	38.33 (6)	6.67 (42)	---
Case Study #11	---	---	---	---	1.08(1505)	---	1.73(708)	4.31 (29)	.79 (38)

*If not included in preparation of the order record.
**No volume reported.

[1] includes training, compiling statistics, removing pacets and numbering
[2] includes some gift processing (including production of gift cards, labels, and numbering)
[3] includes MARC statistics and spot-checking orders
[4] includes retyping orders previously submitted to reflect changes
[5] includes preorder coding to prepare orders for input into automated system
[6] includes only keypunching and verification for production of multiple order records
[7] includes encumbering of new orders
[8] includes filing forms
[9] includes totaling order slips

The direct salary and fringe benefit costs for each of these tasks were also calculated against the throughput reported. The resulting unit costs do not reflect the wide ranges observed in time statistics for the same tasks. The only widely varying cost reported was for title selection and review, ranging from 3¢ (in Case Study #5) to $1.00 (in Case Study #9). Again, it is assumed that this is caused by the varying responsibilities of acquisitions staff within individual libraries. Order request preparation, a task common and similar among the case studies, reflects only minimum cost differences (ranging from 10¢ in Case Studies #5 and #7, to 29¢ in Case Study #9). This close distribution also appears in remaining ordering and selecting tasks.

Tablell. Acquisitions--Selection and Ordering--Average Unit Costs as Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Direct Labor Cost(in Dollars) Observed in Case Studies For:								
	Title Selection and Review	Approval Plan Processing	Prepare Order Request Card	Preorder Searching		Assign Vendor and Fund	Prepare Order Record	Type Purchase Requisition	Revise, Sign and Mail Requisition
				System	Other				
LARGE ACADEMIC									
Case Study #1	$ .31	$ .22[1]	$ .26[2]	---	$ .42	$ .05	---	$ .31	$ .02[3]
Case Study #2	---	---	$ .17[4]	$ .13	$ .14	$ .06[5]	$ .08[6]	$ .26	---
OTHER ACADEMIC									
Case Study #3	NO OBSERVATIONS REPORTED FOR THESE FUNCTIONS								
Case Study #4	$ .38	---	---	---	$ .19	$ .08	$ .13	$ .09	---
LARGE PUBLIC									
Case Study #5	$ .03	$ .50	$ .10	$ .05	$ .18	$ .07	$ .02[7]	$ .07	$ .07
REGIONAL									
Case Study #6	NO OBSERVATIONS REPORTED FOR THESE FUNCTIONS								
Case Study #7	$ .41	---	$ .10	---	$ .39	$ .03	$ .12	**	---
OTHER PUBLIC									
Case Study #7	$ .42	$ .31	$ .18	$ .24[8]	$ .39	$ .25	---	$ .42	$ .17
Case Study #8	$ .08	$ .33	---	$ .05	$ .32	$ .24	$ .12	$ .44	$ .04[9]
STATE LIBRARIES									
Case Study #9	$1.00	---	$ .29	---	$ .24	$ .38	$3.07	$ .53	---
Case Study #10	---	---	---	---	$ .09	---	$ .14	$ .34	$ .10

*If not included in preparation of order record.

** No volume reported.

[1] includes training, compiling statistics, removing pacets and numbering
[2] includes some gift processing (including production of gift cards, labels, and numbering)
[3] includes MARC statistics and spot-checking orders
[4] includes retyping orders previously submitted to reflect changes
[5] includes preorder coding to prepare orders for input into automated system
[6] includes only keypunching and verification for production of multiple order records
[7] includes encumbering of new orders
[8] includes filing forms
[9] includes totaling order slips

Table 12 displays the average unit times for follow-up and receipt tasks. Routine tasks, such as sorting, filing, unpacking and checking receipts against packing lists are closely clustered despite size or type of library. The combined tasks of sorting and filing order forms vary only from .77 minutes (Case Study #11) to 1.5 minutes (Case Study #4) despite the wide range of volume throughput reported by the Case Studies. This close proximity of observations did not exist in any of the other follow-up and receipt activities. However, receipt and accession routines (which in practice vary considerably from institution to institution) varying from .67 minutes (in Case Study #9) to 6.3 minutes (in Case Study #10) were for the most part (five out of eight observations) clustered around 1.5 minutes. The check-in and preparation of invoices for payment reflect a greater range, and highly disbursed distribution. For Case Study #2, encumbrance routines and claiming are automated.

Table 12. Acquisitions--Follow-up and receipt--Unit Times as Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Times (in Minutes) Observed in Case Studies for:								
	Sort Order Forms	File Forms	Encumber or prepay Routines	Unpack and Check off Receipts	Receipt and Accession	Notify Requestor	Check-in Prepare for payment	Clear In-Process File	Claims Routines
LARGE ACADEMIC									
Case Study #1	.28(6491)[1]	.55(5492)	.57(386)	.89(1897)	1.37(1585)	1.40(75)	6.85(1603)[2]	.95(937)	.94(165)
Case Study #2	.59(1264)	.40(3326)	---	*	1.39(1552)	---	5.23 (283)[3]	1.42(722)	7.40(25)[4]
OTHER ACADEMIC									
Case Study #3	NO VOLUME THROUGHPUT REPORTED IN THESE FUNCTIONS								
Case Study #4	1.43 (235)	.07 (75)	---	.93 (145)	---	2.43(35)	2.87 (47)	---	---
LARGE PUBLIC									
Case Study #5	.54(4381)[5]	.44(6234)[6]	.56(1937)	.41(8300)	1.27(5738)[7]	---	5.19 (540)	.49(620)	4.36(404)
REGIONAL									
Case Study #6	---	---	1.79 (28)	.74(1189)[8]	1.69 (254)	---	1.51 (464)	---	2.50 (4)
Case Study #7	.38 (890)	.48 (890)	---	.68(1010)	---	2.59(29)	14.55 (33)	---	5.00 (4)
OTHER PUBLIC									
Case Study #8	---	---	4.29 (7)	.85 (27)	2.83 (30)	3.00 (5)	2.50 (6)	---	5.00 (1)
Case Study #9	.44(1224)	.61(1450)	---	.50(2879)	.67(3028)	---	2.13(570)	---	10.00 (4)
STATE LIBRARIES									
Case Study #10	---	.17 (205)	---	.81 (614)[9]	6.30 (166)	---	12.91 (86)	**	---
Case Study #11	.48(1471)	.29 (490)	---	.45 (220)	1.48 (108)	5.00 (1)	12.81 (16)	1.00(50)	5.00 (1)

* No volume throughput recorded.

Numbers in parenthesis indicate the number of volumes recorded
*observations deleted due to variance in units employed
**no volume throughput reported

[1] includes assigning order number and collating; no bursting of forms.

[2] units used are volumes, not invoices.

[3] includes sorting incoming invoices, matching payment cards and preparing vouchers for accounting office.

[4] includes only claims by letter; other are produced automatically.

[5] includes mailing orders

[6] prepayments only

[7] includes checking small shipments for order cards, descrepancies, etc.

[8] includesmatching cards with book for some observations; excludes checking against packing list

[9] includes checking against packing list only.

The costs of these follow-up and receipt activities are reflected in Table 13. We note, again, that the costs of those routine activities (similar across libraries) which were closely clustered in Table 12 are also closely clustered in Table 13. Similarly, the costs of less routine tasks differing in practice among libraries (such as notification of the requestor, preparing invoices and claims) are disbursed.

Table 13. Acquisitions--Follow-up and receipt--Direct unit labor costs observed in 11 case studies.

Case Study and Type	Direct Labor Unit Costs (in Dollars) In Case Studies For:								
	Sort Order Forms	File Forms	Encumberance or Prepayment Routines	Unpack and Check Off Receipts	Receipt and Accession	Notify Requestor	Check-in, Prepare for payment	Clear In-Process File	Claims Routines
LARGE ACADEMIC									
Case Study #1	$ .02[1]	$ .05	$ .05	$ .04	$ .06	$ .12	$ .57[2]	$ .08	$ .07
Case Study #2	$ .03	$ .02	---	*	$ .14	---	$ .37[3]	$ .09	$ .69[4]
OTHER ACADEMIC									
Case Study #3	NO VOLUME THROUGHPUT REPORTED IN THESE FUNCTIONS								
Case Study #4	$ .06	$ .01	---	$ .07	---	$ .31	$ .21	---	---
LARGE PUBLIC									
Case Study #5	$ .06	$ .05	$ .06	$ .03	$ .12[7]	---	$ .53	$ .06	$ .49
REGIONAL									
Case Study #6	---	---	$ .14	$ .06[8]	$ .08	---	$ .12[2]	---	$ .20
Case Study #7	$ .06	$ .08	---	$ .11	---	$ .42	$2.36	---	$ .81
OTHER PUBLIC									
Case Study #8	---	---	$ .20	$ .08	$ .14	$ .15	$ .18	---	$ .35
Case Study #9	$ .02	$ .04	---	$ .04	$ .04	---	$ .18	---	$1.00
STATE LIBRARIES									
Case Study #10	---	$ .09	---	$ .07[9]	$ .67	---	$1.09	***	---
Case Study #11	$ .04	$ .02	---	$ .04	$ .12	$ .39	$1.01	$ .08	$ .39

**Includes only claims which entail correspondence, remaining claims are produced automatically through automated system.
***No Volume Througput Reported.

*observations deleted due to variance in units employed
**no volume throughput reported
[1] includes assigning order number and collating; no bursting of forms.
[2] units used are volumes, not invoices.
[3] includes sorting incoming invoices, matching payment cards and preparing vouchers for accounting office.
[4] includes only claims by letter; other are produced automatically.
[5] includes mailing orders
[6] prepayments only
[7] includes checking small shipments for order cards, descrepancies, etc.
[8] includesmatching cards with book for some observations; excludes checking against packing list
[9] includes checking against packing list only.

Low frequency activities imply that these activities would vary in volume and relative times across libraries. Indeed, this is reflected in Table 14, average unit times for low frequency acquisition activities. For the most part, only the latter two activities of this table are affected by the use of an automated system -- renewals, and work with an automated system. We find that among those libraries using an automated acquisition system, Case Study #2 is the only library using the system for automatic renewals. No time information is reported. Work with an automated system, the last activity reported in Table 14, cannot easily be compared across libraries. For Case Study #1, the work involved includes the production of a serials list, while for Case Study #2, a variety of activities are included. Due to the varying volume indicated in other activities, such as gift routines, there is little conclusion which can be drawn. The sub-steps of these tasks vary from library to library. It is interesting to note, however, that in tasks where the volume is more closely approximate (i.e., cancellations in Case Studies numbers 1, 2, 5, 6, 9, and 11), the unit times are particularly similar. For cancellations, observations in high volume case studies varied only from .42 minutes (in Case Study #6) to 2.13 minutes (in Case Study #5).

Table 14. Acquisitions--Low Frequency Activities--Average Unit Times Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Times (in minutes) observed in case studies for:						
	Gift Routines	Exchange Routines	Cancellation Routines	Return Routines	Out-of-print Routines	Renewals or Continuations	Work with Automated System Other Than Preorder Searching
LARGE ACADEMIC							
Case Study #1	1.00(1320)	*	1.16 (340)	2.13(285)	8.06 (103)	---	.48 (5589)
Case Study #2	.32(13,602)	1.81(897)	1.44 (216)	9.47 (38)	4.00 (10)	---	1.52 (2434)
OTHER ACADEMIC							
Case Study #3	NO OBSERVATIONS IN THESE FUNCTIONS						
Case Study #4	3.73 (83)	---	---	10.00 (4)	*	6.00 (10)	---
LARGE PUBLIC							
Case Study #5	.38 (475)	---	2.13 (141)	4.18(570)	.98(430)	---	.37 (490)
REGIONAL							
Case Study #6	1.48 (71)	---	.42(968)	2.31 (13)	---	---	---
Case Study #7	8.33 (3)	---	10.00 (1)	2.50 (14)	3.75 (4)	2.50 (30)	---
OTHER PUBLIC							
Case Study #8	5.68 (96)	---	---	15.00 (1)	---	2.50 (2)	---
Case Study #9	.16(1760)	---	1.60(144)	---	.12(250)	5.00 (65)	*
STATE LIBRARIES							
Case Study #10	5.00 (1)	---	5.00 (1)	7.00 (10)	1.54 (13)	---	---
Case Study #11	---	---	1.02(256)	5.00 (2)	---	5.00 (1)	---

*No volume throughput recorded for this activity.

Numbers in parenthesis indicate number of volumes recorded.

Table 15 reflects the unit costs for these activities. The major question arises as to the value of certain processes in low volume low frequency activities. For instance, in the case of Library #7, the utility of accepting a gift which costs $1.35 to process through the acquisition process alone (not to mention cataloging, shelving, and storage costs) is susceptible to some review. This high cost, of course, is a function of the low volume (three, in this case) observed in the process. One would expect this to drop in cases of a higher volume of gifts received during a specific interval.

Table 15. Acquisitions--Low Frequency Activities--Average Direct Labor Cost Per Unit

Case Study and Library Type	Average Unit Direct Labor Cost (in Dollars) In Case Studies For: Gift Routines	Exchange Routines	Cancellation Routines	Return Routines	Out-of-Print Routines	Renewals or Continuations	Work with Automated System Other than Preorder Searching
LARGE ACADEMIC							
Case Study #1	$ .12	*	$ .07	$ .24	$ .92	---	$ .05
Case Study #2	$ .02	$ .09	$ .17	$ .88	$ .37	---	$ .11
OTHER ACADEMIC							
Case Study #3	NO OBSERVATIONS IN THESE FUNCTIONS						
Case Study #4	$ .21	---	---	$ .80	*	$1.15	---
LARGE PUBLIC							
Case Study #5	$ .03	---	$ .25	$ .40	$ .09	---	$ .04
REGIONAL							
Case Study #6	$ .12	---	$ .03	$ .18	---	---	---
Case Study #7	$1.35	---	$1.62	$ .41	$ .61	$ .41	---
OTHER PUBLIC							
Case Study #8	$ .27	---	---	$1.06	---	$ .10	---
Case Study #9	$ .02	---	$ .18	---	$ .02	$1.00	*
STATE LIBRARIES							
Case Study #10	$ .40	---	$ .40	$ .56	$ .12	---	---
Case Study #11	---	---	$ .08	$ .39	---	$ .39	---

*No volume throughput reported.

V. CATALOGING

Of special interest to any consideration of networking and resource sharing is the area of cataloging and the effects upon libraries brought about by shared cataloging ventures. As a part of these investigations, cataloging data requirements included:

- budgeting and expenditures in cataloging;
- staffing patterns and salary expenditures;
- cataloging source statistics;
- cards produced;
- throughput; and
- lag times, and backlog statistics.

Each of these areas of study within cataloging seemed of particular relevance to the advance of networking in the West.

Unfortunately, many of the libraries within the sample do not maintain separate cataloging departments. Thus, financial and staffing information within these libraries was unavailable, and relevant data reflect only the larger libraries within the sample.

A. Throughput and Budgeting

Prior to data collection, it was assumed that same type libraries might behave more similarly than other divisional classifications. However, cataloging data would tend to support the theory that same size libraries (regardless of type) are more consistently comparable. If correction were made for the clear variance of volume to title ratio (which is higher among public libraries), evidence exists that large public and large academic libraries are closely related, while other academic libraries display similar patterns to other public libraries.

Table 16 summarizes the cataloging title throughput exhibited in the strata. Large Academic Libraries report twice the throughput of each material type as the next ranking library stratum, Large Public Libraries. In turn, Large Publics averaged twice the throughput of Other Academics and State Libraries. These wide differences in processing should be kept in mind when comparing the cataloging statistics which follow.

Table 16 Cataloging throughput

Type of Library	Average titles thoughput annually							
	Monographs		Serials		Other		Total*	
Academic								
Large	33,070	(10)	2,524	(10)	3,949	(8)	38,752	(10)
Other	6,827	(16)	738	(9)	414	(8)	7,450	(16)
Public								
Large	14,062	(11)	997	(5)	1,988	(5)	15,419	(11)
Regional	4,611	(7)	223	(3)	210	(2)	4,766	(7)
Other	2,514	(13)	201	(4)	415	(3)	2,671	(13)
State	5,946	(10)	154	(4)	1,577	(6)	6,954	(10)

Number in parenthesis represent the number of libraries reporting non-zero statistics.

*The total is not the total of average reported in columns (a), (b), (c), rather the average across all types and titles reported.

Generally, cataloging departments within academic libraries received a greater percentage of the total library operating budget than that received by other types of libraries. This may reflect a more accurate assessment of expenditures which academic libraries were able to provide, rather than a veritable difference. Frequently, public libraries were unable to provide detailed departmental expenditures beyond those of salaries and fringe benefits. These data are reflected in Table 17 . Caution should be used in assessing the percentage of labor costs to the total departmental budgets. Many libraries unable to report detailed expenditures beyond salary and fringe benefit costs within a department skew the resulting figures. In Table 17 , libraries reporting only salary information have been deleted from consideration in the salary percentage of departmental budget column. However, special note should be taken of the large public library ratio of cataloging labor cost to departmental costs. A low figure of 78% is indicated for those libraries reporting more than a salary expenditure in cataloging budgets. Table 17 also evidences the possibility that combined automated service and other support purchased from outside the library (defined as services or products procured by the library which supplant in-library tasks, increase cost-efficiency, etc.) may impact the professional librarian staffing ratio. Further investigation would be required to verify this fact. However, Large Academics and Publics report a far lower professional staff ratio than expected, generally less than that reported in Other Academics and State Libraries. Indeed, Large Academics (which report the highest level of automated and other support) report professional ratios only slightly above those observed in Other Publics.

Table 17. Cataloging Departments -- General Profile

Type of Library	Departmental Percentage of Total Operating Budget	Departmental Percentage of Total Salary Budget	Salary Percentage of Departmental Operating Budget*	Number of Libraries Reporting		Professional to Other Ratio
				Automation	Support Service	
Academic						
Large (9)	15.7%	16.2%	96% (5)	3	3	.35
Other (13)	16.7%	18.9%	97% (7)	0	2	.52
Public						
Large (7)	5.8%	5.2%	78% (3)	2	3	.43
Regional (8)	7.0%	7.8%	94% (5)	1	1	.36
Other (5)	8.1%	9.6%	96% (2)	1	2	.31
State (7)	6.0%	7.7%	91% (3)	1	2	.73

*Numbers in parenthesis indicate number of libraries reporting.

B. Staffing

In general, the average full-time equivalencies (FTE) observed in cataloging departments declined with concomitant (though unequal) drops in title throughput. Cataloging departments in Regional Libraries tended to be smaller than Other Publics. This is, in part, influenced by the number of larger Other Publics; and, in part, due to the number of small Other Publics not reporting separate cataloging departments. Thus, data reflect only the larger representatives of Other Publics.

Table 18. Title Throughput and Title Cataloging Costs

Type of Library	Departmental FTE	Annual Title Throughput Per FTE	Average Salary Cost Per Title	Average Departmental Cost Per Title Throughput*
Academic				
Large (10)	43.8 FTE	885 Titles	$11.28	$11.76 (9)
Other (13)	6.5	1396	6.37	7.07 (11)
Public				
Large (9)	22.9	778	11.46	14.19 (7)
Regional (7)	2.6	1826	4.38	4.72 (6)
Other (5)	5.3	1080	5.64	7.81 (4)
State (9)	4.8	1545	6.49	6.07 (6)

Numbers in parenthesis indicate number of reporting libraries.
*Differences between average departmental costs and salary costs are due to the number of libraries reporting and the inclusion of fringe benefits in this column.

As might not be expected, the economics of scale are somewhat reversed, with Large Public and Large Academic libraries spending considerably more per throughput than those average unit costs observed in other stratum. This would give credence to the theory of a "U-shaped" curve of cost distribution. That is, libraries at either end of the spectrum, large and small, experience higher costs per throughput than middle-size libraries. This would account, then, for the higher unit cost of Other Publics, reporting the least average annual throughput, and the lowest unit cost reported for the Other Regional stratum. Of course, fuller, and more detailed, investigation would be required to verify this distribution. In fairness to the two large library strata, a larger number of special responsibilities within cataloging departments can be factors in the large unit costs. The reader should recall that professional percentages of cataloging staffs were relatively low in these strata. For the smaller library strata, costs can be higher due to the start-up time involved in processing a small number of items throughout the year, so that each lot or batch requires additional time. Further, many cataloging departments within small public or academic libraries may assume the duties of several departments, such as serials, binding, and acquisitions. The final column of Table 18 displays the observed average expenditure per title throughput made within the cataloging department. Variances between the average salary cost and total departmental costs per throughput can be attributed to the differences in the reporting base of each statistic. Special note should be made of the high volume to title ratio (4.85 to 1) observed in the Large Public Library stratum when assessing these costs. Also, one should keep in mind the high card per title ratio of most large public and academic libraries which is due to the number of branches and receiving files.

C. Cataloging Patterns

As a potential key to cataloging costs the reader should examine the wide variances in volume to title ratios and the card entries per title made, on the average, within stratum. This is of particular importance to the cataloging costs of Large Public Libraries, where the average volume to title ratio observed is nearly five, and where the number of cards necessary per title is high. Table 19 reflects these ratios. The particularly high record entry per title ratio noted in the Large Academic stratum may be accounted for by the number of branches receiving catalogs usually maintained in research libraries. This ratio would appear to have a correlation to the average salary expenditures per title throughput noted in Table 18.

Table 19. Card and volume ratios.

Type of Library	Volume to Title Ratio (Bookstock)	Average Entry (Cards or Records) Per Title		
		Monograph	Serial	Other
Academic				
Large	1.62 (8)	10 (9)	9 (8)	9 (6)
Other	1.38 (12)	6 (14)	5 (8)	6 (9)
Public				
Large	4.85 (11)	8 (11)	4 (10)	5 (5)
Regional	2.54 (7)	5 (7)	4 (3)	5 (3)
Other	1.32 (16)	5 (15)	4 (8)	4 (8)
State	3.60 (9)	5 (10)	5 (5)	6 (8)

Numbers in parenthesis indicate the number of libraries reporting.

Cataloging source information was of special interest to this investigation into the present patterns of cataloging; and potential implications to increased cooperative cataloging furthered through networks. Also, the assumption that cataloging source could be a factor in the costs of cataloging seemed worthy of further study. Table 20 notes the varying cataloging patterns employed by each of the strata. Sources were:

- LC copy or card (from a source such as LC printed cards, or proof slips, but excluding sources such as OCLC, Baker and Taylor),
- NUC copy,
- Cataloging-in-print (CIP) data on title page verso,
- Secondary source (such as Baker and Taylor, BALLOTS, OCLC, etc.), or
- Original cataloging.

As is clearly evident, LC data is utilized by Large Academic and Large Public Libraries most often. The high level of LC utilization in these strata can be correlated to the level of proof slip subscriptions. Among Large Academic Libraries, 44% subscribe to proof slips, while 36.4% of the Large Publics maintain subscriptions. Proof slip subscriptions in other strata ranged from none (in Regional Libraries) to 13% (in Other Academic Libraries) of reporting libraries. Secondary sources (such as commercial cataloging services and cataloging network services) are utilized in higher percentage by smaller public and academic libraries as well as state libraries. The high rate of original cataloging performed among other public libraries may point to the unavailability of bibliographic tools; however, the data are too unrefined to verify this fact. Whatever the cause for this rate of original cataloging, there does exist among these libraries a need for greater access to shared cataloging sources. Other Publics, as well as Other Regionals also rely on CIP data, as would be expected.

Table 20 Cataloging patterns by stratum

Type of Library	Percent of cataloging performed from: LC data	NUC data	CIP data	Secondary source	Original cataloging
Academic					
Large (10)	59%	6%	*	20%	14%
Other (16)	33%	14%	8%	34%	11%
Public					
Large (11)	41%	7%	10%	28%	14%
Regional (8)	16%	2%	36%	36%	10%
Other (14)	4%	17%	31%	38%	27%
State (9)	15%	14%	14%	39%	17%
Overall (68)	28%	8%	16%	33%	15%

Numbers in parenthesis indicate the number of libraries reporting.
* less than .5%

It is interesting, and perhaps worth further investigation, that Large Publics and Large Academics report similar cataloging sources as well as similarly high cataloging costs. By ranking the costs of cataloging against the sources of cataloging, we find startling, but speculative, patterns. The three strata reporting the highest unit costs (Large Academic, Large Public and Other Academic) also report similar patterns of cataloging, depending heavily upon LC cataloging data. On the other hand, State libraries, Other Publics and Regionals (reporting the lowest cataloging costs) indicate higher use of CIP data and secondary source information.

Other data collected via the survey included:

- volume to title ratio of bound periodicals,
- backlog, and
- processing lag time (turnaround).

Each of these figures were estimated by participants where no definitive data were available. Findings are displayed in Table 21 . Backlogs were highest among the Large Academic Libraries (averaging 43,450 volumes) and Large Public Libraries (averaging 7,467 volumes). Similarly, the highest observed turnarounds (date an item is received from acquisitions to the date an item is processed, including production of master card and physical preparation) were indicated by these strata. However, the extent of support services in these two strata would point to the lack of influence of this support upon backlog and turnaround.

Table 21. Cataloging Miscellany

Type of Library	Volume to Title Ratio		Backlog (in vol.)	Turnaround (in days)
	Bookstock	Bound Periodicals		
Academic				
Large	1.62:1 (8)	none reporting	43,450 (10)	33 (10)
Other	1.38:1 (12)	24.03:1 (6)	1,582 (14)	28 (15)
Public				
Large	4.85:1 (11)	24.26:1 (4)	7,467 (9)	28 (11)
Regional	2.54:1 (7)	59.79:1 (4)	711 (8)	17 (9)
Other	1.32:1 (16)	42.53:1 (7)	224 (9)	9 (14)
State	3.61:1 (9)	29.70:1 (4)	711 (9)	25 (9)
Overall	2.44:1 (63)	35.88:1 (25)	9,118 (59)	23 (68)

Numbers in parenthesis indicate the number of libraries reporting.

D. Cataloging Support Services

Support services were considered to be services or products procured by the library, and systems developed for the library, which increased cost-efficiency, increased throughput, or supplanted in-library tasks. Cataloging support services could be pre-processing, automated cataloging systems, printed card sets, or bibliographic center processing. Tables 22 to 27 display costs and throughput for each stratum and cataloging activity for which services were procured. The reader will note in the following tables that:

- Observations of support service for searching for cataloging data occurred in all strata; average cost per title searched ranged from 36¢ (in Other Academics) to 44¢ (in Large Publics). Combined with card production and production of shelf materials, it was observed at 73¢ in one State Library.
- Average cost of production of cataloging copy was cited at 62¢ per title in Large Public Libraries; included with card production and shelf preparation materials, costs for this service were observed at $6.10 per title.
- Production of catalog cards was a service procured by members of each stratum: Average unit costs ranged from 20¢ (in Large Publics) to $2.00 (in Large Academics) per card set.
- Nine libraries in the sample reported the production of book catalogs; of these, only two libraries were able to indicate per title entry costs, at $1.70 (for an Other Academic) and 25¢ per title entry (for a State Library).

- Members of all strata indicated the purchase of prepared shelf materials (e.g., labels, pockets); average per volume costs were normally included in other support service costs. The one library reporting this data element indicated a 9¢ per volume cost.

- Original cataloging cost, reported by one Other Academic Library averaged $11.50 per title.

The largest number of activities within cataloging were supported by outside services for Large Academic Libraries. The reader will recall that this is also the strata where the second highest cost per title throughput was observed. As Table 22 indicates, unit cost information for these services was generally unavailable. However, more than half of the large academic respondents indicated support for:

- searching cataloging data,
- producing cataloging copy, and
- card production.

Further, the majority of reported large academic cataloging throughput was processed with the use of these services.

Table 22. Cataloging Support--Large Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Verification that material is not already cataloged	1	1	titles	50,000	*	*
Searching for cataloging data	5	4	titles	32,350	*	*
Producing cataloging copy	6	5	titles	20,750 (4)	$35,740 (1)	*
Production of catalog cards or printed card sets	5	5	cards card sets	300,000 (1) 38,550 (3)	$27,550 (2)	$ 2.00
Production of shelf preparation materials	1	1	labels	700,000	*	*
Catalog authority control	2	1	titles	3,000	*	*
Production of specialized bibliographies	1	1	profiles	150	$ 3,000	$ 20.00
Statistics on number of titles cataloged	3	3	reports titles	12 (1) 25,000 (2)	*	*
Production of special art catalog	1	1	copies	6,000	$20,000	$ 3.33
Reports on in-process materials	2	2	reports volumes	6,000 (1) 35,000 (1)	* $ 6,000 (1)	$ .17 (1)
Prefiling of catalog cards	3	0	*	*	*	*
Production of magnetic tape of titles processed	1	1	titles	25,000	$ 250	$ .01

Number in parenthesis indicates number of libraries reporting if different from column (2).
*No information.

Among Other Academic Libraries reporting, ten libraries reported purchasing produced catalog cards. Four also reported procuring production of shelf preparation materials. Remaining services were procured only by single institutions reporting. For card production, less than half the volume throughput reported was supported via outside service. One library reported in-house computer support of cataloging. Costs of system development were $18,000 while annual maintenance cost $8,400 during the last reporting year. The reader is reminded that Other Academics reported a middle range average cost per throughput compared to other strata.

Table 23. Cataloging Support--Other Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Verification that title is not already cataloged	1	1	titles	100	*	*
Searching for cataloging data	1	1	titles	500	$ 180	$ .36
Producing cataloging copy	1	1	titles	3,650	$22,265[1]	$ 6.10[1]
Production of catalog cards or printed card sets	10	9	card sets cards	3,584 (8) 46,747 (1)	$ 1,514[1](8)	$ .48[1](8)
Production of book catalog	1	1	titles	5,000	$ 8,500	$ 1.70
Production of shelf preparation materials	4	2	volumes	9,278	$ 91 (1)	$ .09 (1)
Catalog authority control	1	0	*	*	*	*
Statistics on number of titles cataloged	1	0	*	*	*	*
Statistics on cataloging costs	1	0	*	*	*	*
Original cataloging processing	1	1	titles	850	$ 9,775	$ 11.50

Number in parenthesis indicates number of libraries reporting if different from column (2).
*No information.
[1] includes cost of card production and shelf preparation materials for one reporting library.

Though Large Public Libraries reported fewer supported activities, the volume processed of each activity supported was higher. Further, a majority of reported throughput was supplemented in searching and the production of cataloging copy. Four Large Publics indicated book catalogs. Three libraries report in-house cataloging automation; annual cost of maintenance ranged from $6,350 to $50,000, averaging $28,117 among the three Large Publics. The reader is reminded that Large Publics reported the highest average cost per title throughput, at $14.20 per title cataloged.

Table 24. Cataloging Support--Large Public Libraries.

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Searching for cataloging data	5	4	titles	14,340 (3)	$ 1,484 (2)	$ .44 (1)
Producing cataloging copy	6	4	titles	10,383 (3)	$ 3,084[1] (3)	$ .62 (2)
Production of catalog cards or printed card sets	2	2	card sets cards	7,892 (1) 40,000 (1)	2,157 (1) $22,000 (1)	.20 (1) $ .55 (1)
Production of book catalog	4	3	supplements sets	4 (1) 93 (1)	$17,519 (1) $78,000[2] (1)	$4,380.00 (1) *
Production of shelf preparation materials	2	2	volumes	40,500	*	*

Numbers in parenthesis indicate number of libraries reporting if different from column (2).

*No information

[1] includes cost of searching for cataloging data from one library, at 44¢ per title and preprocessed materials at 79¢ per volume.

[2] includes average annual printing cost of $50,000 per year.

One half of the Other Regional Libraries reporting indicated card production support, while 30% reported outside service for the production of shelf preparations materials. In both instances more than 50% of the reported title throughput was supported. Other Regionals reported the lowest per title throughput cost. One regional library reported the use of a book catalog, while one indicated the production of a microform catalog.

Table 25. Cataloging Support--Other Regional Libraries.

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Searching for cataloging data	2	1	searches	8,000	*	*
Producing cataloging copy	1	0	*	*	*	*
Production of catalog cards or printed card sets	5	5	card sets	6,826	$ 708 (4)	$ .30 (4)
Production of book catalog	1	1	copies	50	*	*
Production of microform catalog	1	1	cumulations	4	*	*
Production of shelf preparation materials	3	3	volumes	10,893	$2,615[1] (2)	$ .14[1] (2)
TWX for catalog information	1	1	*	*	$ 480	*

Number in parenthesis indicates number of libraries reporting if different from column (2).

*No information

[1] includes costs of one library for searching and card production at 25¢ per volume.

Also among Other Public Libraries, more than 50% of the reporting libraries indicated the purchase of produced cards. This, however, did not represent more than one-half of the title throughput for all Other Public Libraries. Five of the thirteen libraries reporting cited support of shelf materials preparation. There was no further data reported on this service.

Table 26. Cataloging Support--Other Public Libraries.

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Searching for cataloging data	1	0	*	*	*	*
Producing cataloging copy	2	0	*	*	*	*
Producing catalog cards or printed card sets	9	6	Card sets Cards	999 (5) 120,000 (1)	$ 602[1] (5) 3,000 (1)	$ .60[1] $ .025
Production of shelf preparation materials	5	0	*	*	*	*
Statistics on number of titles cataloged	1	1	reports	1	2.00	$ 2.00
Statistics on cataloging costs	3	1	reports	1	2.00	$ 2.00

Number in parenthesis indicate number of libraries reporting if different from column (2).
*No information

[1] Includes cost of shelf preparation materials for all observations included in results.

State Libraries indicated a variety of activities supported through outside services, including verification, searching, production of cataloging copy or cards, book and microform catalog production, production of shelf preparation materials, catalog authority control, specialized bibliographies, and the production of cataloging cost statistics. Results appear in Table 27.

Table 27. Cataloging Support--State Libraries

Type of Activity	Number of Libraries Reporting Support	Number of Libraries Reporting Data	Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
Verification that material is not already cataloged	2	0	*	*	*	*
Searching for cataloging data	3	1	volumes	9,000	$ 6,570[1]	$ .73[1]
Producing cataloging copy	1	0	*	*	*	*
Production of catalog cards, or printed card sets	4	4	card sets	4,761	$ 2,298[2]	$ .48[2]
Production of book catalog	3	2	copies titles	350 (1) 5,000 (1)	$ 18,000 (1) $ 1,250 (1)	$ 51.43 $ .25
Production of microform catalog	3[3]	0	*	*	*	*
Production of shelf preparation materials	2	2	volumes	9,453	*	*
Producing specialized bibliographies	3	2	issues titles	12 (1) 10,000 (1)	$ 65 $ 1,000	$ 5.41 $ .10
Statistics on cataloging costs	1	0	*	*	*	*

Number in parenthesis indicates number of libraries reporting if different from column (2).
*No information

[1] Includes card production, and production of shelf materials.
[2] Includes one observation of both card production and label production at a cost of 55¢ per volume.
[3] Includes one catalog which is proposed.

E. Case Studies in Cataloging

Looking to the case studies for potential indicators of the varied costs for unit cataloging expenditures, we find that a high percentage of staff time in Large Academics and Publics is devoted to special projects. Further, there would appear to be a higher diversification of tasks within these larger strata. Staffing patterns did not appear to be a key to the higher cost factors among Large Academics and Publics. As Table 28 exhibits, the percentage of professional labor is not consistent within academics and state libraries. However, within the public library strata we find a fairly consistent average, ranging from twenty to twenty-four percent of the total cataloging staff time. These discrepancies in staffing patterns become even more evident in other categories of employee found in the cataloging functions of the case studies. According to Table 28, supervisory, administrative, unassigned, or professional consultation percentages are not significantly higher in the Large Academics, and are indeed, somewhat lower in Large Publics. Given this information, the causes of higher costs of cataloging observed in Large Academics and Large Publics remain elusive. Taking the case study data a step further, we find that the answer may rest with the type of activities, and the amount of time devoted to processing spent by these categories.

Table 28. Cataloging--Staffing Characteristics as Observed in 11 Case Studies.

Case Study and Library Type	Percent of total reported time spent by:						Percent of Total Time In "Production" Activities*	Total Hours Spent
	Professional		Library Assistant	Clerk	Student Assistant/ Page	Other Employee Paid by Outside Source		
	Librarian	Other						
LARGE ACADEMIC								
Case Study #1	13.4%	0.0	55.0%	12.8%	18.8%	0.0	79.4%	3037.1
Case Study #2	32.9%	0.0	38.9%	25.1%	3.0%	0.0	76.6%	2086.2
OTHER ACADEMIC								
Case Study #3	66.5%	33.5%	0.0	0.0	0.0	0.0	45.1%**	130.2
Case Study #4	26.0%	0.0	5.4%	31.3%	5.9%	31.4%	80.0%	323.1
LARGE PUBLIC								
Case Study #5	21.6%	0.0	3.8%	65.5%	0.0	9.0%	85.2%	2931.4
REGIONAL								
Case Study #6	24.5%	0.0	0.0	65.6%	6.4%	3.5%	79.5%	493.7
Case Study #7	20.1%	0.0	79.9%	0.0	0.0	0.0	88.0%	619.8
OTHER PUBLIC								
Case Study #8	23.0%	0.0	0.0	29.2%	0.0	47.7%	84.6%	89.8
Case Study #9	21.6%	0.0	4.6%	50.8%	23.1%	0.0	86.3%	692.8
STATE LIBRARIES								
Case Study #10	19.9%	0.0	57.1%	22.9%	0.0	0.0	92.9%	368.6
Case Study #11	33.3%	0.0	25.3%	41.3%	0.0	0.0	79.1%	323.3

* Excludes time spent in supervision, administration, training, breaks, peer consultation, meetings, and unassignable time.

** This figure may be somewhat low due to the extent of participation in cataloging of the director of the library, whose time spent in administration may reflect time spent in general administration of the library.

For ease of display, and discussion, the following tables taken from data submitted by the case studies are divided into three independent groups of activities found within cataloging. They are:

- Precataloging activities (searching for copy, bibliographic verification, transcribing or copying card copy, and matching the card or copy with the title),
- Cataloging paths (added copy/added volume routines, original cataloging, cataloging with cards/card copy, abbreviated, rush cataloging, and cataloging from system records), and
- End processing (cataloging revision, catalog card production, card revision, prefiling, filing and physical processing of the item).

Tables 29 and 30 address the precataloging activities, both unit times and unit direct labor costs, as observed in the eleven case studies. None of these figures can be looked at in isolation of the remaining activities or without regard for the relative volume processed through these tasks. One can clearly recognize, for instance, that not all volume processed within the case studies was funneled through bibliographic verification, beyond locating cataloging cards. Weighting the observations according to throughput may be misleading, as well. The data collection interval was not intended as a closed interval, such that processing material input to the cataloging process would equal the output of processing. Thus, observations include the volume counts of materials "in-process" at the initiation of data collection, as well as those materials that entered the cataloging process during data collection. Keeping this fact in mind, a cursory look at Table 29 would indicate that these activities are not consistent throughout case studies, or even within stratum. Also, there is some hazard in assuming observations with a small (less than six) volume throughput as accurate. A round-off error is of course inherent in all observations, but particularly where volume throughput was exceedingly small, and time was rounded off to the nearest five minutes. This could augment actual times by as much as 2.5 minutes in the case of throughput of one. In addition, minor variations in the procedures and policies of each case study impact the unit times spent on any single task. For instance, the rather high observation of nine minutes for transcribing cataloging copy in Case Study #2, includes manual (handwritten) transcription of data from the source to a workform. Needless to say, this is a lengthier process than using a camera for copying a catalog record.

Interestingly, the unit time difference between Case Study #1 and Case Study #2 for combined searching of cataloging copy, and other bibliographic verification, is only 10 minutes. However, it would appear that only a small portion of throughput receives bibliographic verification beyond that of cataloging copy search, while within Case Study #2 a near equal throughput is observed in both activities. We also find a similar pattern in the large public case study and the other regional studies -- that is, the combined tasks of searching and bibliographic verification are very close to an average of three minutes for all three case studies. This is also true for Case Study #9 (an other public) and not significantly below that average in Case Study #11 (a state library). Matching cards or card copy with the item varies more dramatically among the case studies. Factors in these time variances may include: the number of distinct titles being processed (conceivably, a match between cards and titles is more difficult if more volumes need to be searched); the point during processing when this activity is performed; and, the number of times during processing this activity is performed. For instance, it is often a practice for public libraries to not only match the card copy with the item prior to cataloging, but also to rematch cards with the item prior to sending the materials to branch libraries or circulation. In Case Study #6, this process included slipping the card and pockets into the appropriate books. Among the smaller libraries limited volume may prevent an economics of scale, especially if volume does not warrant batching.

Table 29. Cataloging--Precataloging activities--Unit Times as Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Time (in Minutes) for the following: Searching for Cataloging Copy	Other Bibliographic Verification	Photographing/ Transcribing Card Copy	Matching card/ card copy with title
LARGE ACADEMIC				
Case Study #1	2.51 (1069)	7.50 (92)	3.66 (665)	1.49 (3981)
Case Study #2	5.27 (529)	4.33 (647)[1]	8.99 (91) [2]	---
OTHER ACADEMIC				
Case Study #3	NO VOLUME THROUGHPUT REPORTED FOR THESE FUNCTIONS			
Case Study #4	4.00 (5)	1.33 (30)	*	*
LARGE PUBLIC				
Case Study #6	1.59 (1204)	1.68 (1144)	1.59 (22)	.82 (2907) [3]
REGIONAL				
Case Study #7	2.90 (231)	---	---	.24 (493)
Case Study #8	2.94 (170)	---	---	1.54 (377)
OTHER PUBLIC				
Case Study #8	---	1.67 (3)	---	4.20 (25)
Case Study #9	3.00 (10)	---	---	2.20 (387)
STATE LIBRARIES				
Case Study #10	5.36 (153)	---	---	---
Case Study #11	3.64 (33)	---	---	.63 (16)

Numbers in parenthesis indicate reported volume throughput.

*No volume throughput reported.

[1] Includes checking data base for cataloged materials for which cards have not yet been filed in public catalogs.

[2] Includes manual transcription of LC data to a workform.

[3] Includes slipping cards and pockets in books.

As Table 30 indicates, the actual direct unit costs may have little relationship to the unit times. For example, our earlier observations that the combined times of searching for cataloging copy and bibliographic verification appear similar in categories of case studies, break down when scrutinized against costs. Firstly, the costs of each are directly related to the category of employee performing the task. Often those times which appear particularly high in Large Academics are counteracted in costs by the use of student help. Certainly, there is a trade-off that each administrator must make between high-paid labor who may perform a task with greater alacrity and low-paid labor that may perform a task more slowly. However, recalling Table 27 , staffing characteristics of cataloging observed in the case studies, we find that Case Study #1 reported the highest percentage of student staffing, along with Case Study #9. In the combined searching and verification tasks, Case Study #1 reports the highest per unit costs for academic case studies, while Case Study #9 indicates a high per unit cost for searching, second only to Case Study #7. Where the differential is most apparently due to staffing is in the final category of matching cards with items. Recalling from the previous table, Case Study #1 and Case Study #8 were relatively close in unit times, we find their unit costs are significantly different. Other case studies reflect a more expected unit cost range.

Table 30. Cataloging--Precataloging Activities--Unit Direct Labor Costs As Observed in 11 Case Studies.

Case Study and Library Type	Average Direct Labor Cost Per Unit In Case Studies For:			
	Searching for Cataloging Copy	Other Bibliographic Verification	Photographing/Copying Card Copy	Matching Card/Card Copy with Title
LARGE ACADEMIC				
Case Study #1	$ .39	$ 1.39	$ .15	$ .03
Case Study #2	$ .61	$ .47[1]	$ .89[2]	---
OTHER ACADEMIC				
Case Study #3	NO VOLUME THROUGHPUT REPORTED FOR THESE FUNCTIONS			
Case Study #4	$ .73	$ .07	*	*
LARGE PUBLIC				
Case Study #5	$ .21	$ .20	$ .18	$ .09[3]
REGIONAL				
Case Study #6	$ .19	---	---	$ .02
Case Study #7	$ .30	---	---	$ .19
OTHER PUBLIC				
Case Study #8	---	$ .07	---	$ .19
Case Study #9	$ .27	---	---	$ .25
STATE LIBRARIES				
Case Study #10	$ .51	---	---	---
Case Study #11	$ .41	---	---	$ .05

*No volume throughput reported for these activities, though time statistics available.

[1] Includes checking data base for cataloged materials for which cards have not yet been filed in public catalogs.

[2] Includes manual transcription of LC data to a workform.

[3] Includes slipping cards and pockets in books.

Turning, now, to the most costly cataloging activities, the actual cataloging of items for the collection, we have broken the tasks into potential paths for the cataloging process:

- Added copy/added volume routines,
- Original cataloging,
- Cataloging with cards or card copy,
- Cataloging with an automated or other system record, and
- Abbreviated or rush cataloging ("Fast-Cat")

Though ostensibly these are partitioned sets without overlap (that is, an item that is cataloged originally is not also cataloged with cards or card copy), there would appear to be some hazard in considering this observation absolute, especially for those case studies using automation (#2 and #7). In at least Case Study #2, successive searches for the same title in the data base were considered even when the title was not found. This counting leads to the potential of counting titles under this category, as well as one of the others (original cataloging or cataloging with cards), in the event that the title is not located in the specified number of searches of the data base. Understanding this potential error, we turn to Table 31 , which displays the unit times and relevant volume throughput observed during the data collection interval at each of the case studies.

For the Large Public and Case Study #9, added copy/added volume throughput outweigh any other single category of processing observed here. Normally, we would assume original cataloging to rank very low as a potential process, this being in many cases a last resort. However, for four of the case studies (2,4,8, and 9) we find a surprisingly high volume throughput. Examining only two categories of processing, original cataloging, and cataloging with cards or card copy, extrapolation from the time reported to the total anticipated volume during the time of data collection indicates that for Case Study #2, the relative percentage was 87.4%, for Case Study #4, 71.5%, for Case Study #8, 92.7%, for Case Study #9, 78% and for Case Study # 10, the related percentage was 100. These percentages seem particularly high when viewed against other case studies: Case Study #1 exhibited a relative percentage of 14.7%; Case Study #5, 22.6%; Case Study #6, 16.2%; Case Study #7, 24.1%; and Case Study #11, 33.8%.

In at least the second case study, much of this is related to the use of the OCLC data base which claims something in the neighborhood of 70% of the throughput, and in which data base a large portion of those materials which would be located in card copy sources are found. This would, of course, result in a relatively high percentage of materials going through original cataloging processes. In the smaller libraries, the access to bibliographic sources for card copy might be limited to only those materials which come to the library preprocessed or with cards (e.g. Josten, or Baker and Taylor). If the State Library Case Study can be considered to process a number of materials of local origin, as well as highly specialized materials, then the extent of original cataloging is justified. The serious economic problems of high original cataloging volume are obvious--the time factor and the technical staff necessary. Cataloging with cards or card copy can often be performed by library technical assistants, while, for the most part, original cataloging is performed by professional librarians. Looking at Table 31, we find that original cataloging may take as much as 4.8 times the staff time as cataloging with cards or card copy (as exhibited by Case Study #1). However, we are also faced with an interesting pattern--in all but Case Study #9, those libraries performing a high percentage of original cataloging, exhibit very little difference between the unit times observed in original cataloging and cataloging with cards or card copy. Indeed, even in objective terms of minutes, Case Study #9 does not exhibit a significant difference. Verifying this against the relative costs of such cataloging measures in Table 32, we find that the insignificant difference in costs exhibited for these particular case studies may warrant original cataloging over the purchase of cataloging information from an outside source. However, before conclusion, let us first evaluate the entire picture of cataloging paths and the relative costs and times exhibited for each path. To state the obvious, it would be more economical to process only added copies or added volumes. Of course, this does not factor in the costs of initially cataloging the first volume or copy which the library already owns. Barring the fact that we could purchase only added copies or added volumes, and avoid cataloging at all, we are faced with what to do with that first appearance of a title in the library. Obviously, each of the case studies has approached this problem somewhat differently conforming to local policies or circumstances.

Ignoring, for the moment, abbreviated or rush cataloging which is a response to a rather immediate and unusual circumstance, there are three alternatives by which an item can be cataloged: original; with cards or card copy; and, with an automated system. For most of the case studies this latter alternative is non-existent at present. For the two libraries (Case Study #2 and Case Study #7) access to automated cataloging systems is different. For the large academic, use includes an on-site terminal connect within the cataloging department, while at the regional library using automation, the use (which was only recently initiated) includes processing requests through an intermediate center, for which the case study prepares the TWX message, and through which the library receives cataloging information. This varying procedure and the significantly different levels of experience with the respective systems (Case Study #2 has been an automated system for a year) prevent comparison. In the instance of Case Study #7, automation is still a limited experiment, and thus, throughput is still low. The activities assumed by the immediate agency for the system may account for the seemingly low 12.79 minutes per cataloged item, even without previous experience with the system. The 10.15 minute figure reflected by Case Study #2 is lower than the actual time for cataloging from system records because of the inclusion of searching (a less time consuming task).

Cataloging with cards or card copy would appear to be variously handled from case study to case study. The unit times observed for the case studies ranged from 1.70 (Case Study #9) to 20.16 (Case Study #2). It should be noted that in at least one case, the large public library, the time spent in cataloging with cards or card copy, included the time to type the master card. The relatively low figure represented in Case Study #1 (4.1 minutes per title) may be attributed to the high volume reported for this activity (2,099 volumes). Among Other Academics and all Publics we find some reason to believe that there is some positive correlation between the unit times observed in original cataloging and cataloging with cards or card copy. That is, by ranking the case studies by the average unit times observed in cataloging with cards or card copy, we approximate the ranking of unit times for original cataloging. There are descrepancies at the lower end of the scale, but these do not appear significant. This would imply the inclusion of common tasks in both routines, which inflate the observed times of the higher ranking cases. It can also be a strenuous task for the original cataloger in a large library to determine unique classification and provide thorough bibliographic description, not required in a smaller library. This would account, of course, for the wide differences between unit times observed for original cataloging and cataloging with cards or card copy in Case Study #1, (14.84 minutes), Case Study #5 (10.13 minutes), and Case Study #11 (9.08 minutes). Similar patterns are exhibited in added copy/added volume routines. The one exception to this is Case Study #5 which, with the highest reported volume throughput, recorded one of the lowest unit times for the process. Including, even this library, we find that by ranking each of the libraries according to the unit times observed for cataloging with cards or card copy, a similar (though not exact) ranking for added copy/added volume routines, further enhancing the common tasks assumption. Though most average observations were in the one to three minute range for added copy/added volume routines, Case Study #2 and Case Study #7 reported highs of 11.64, and 7.24 minutes respectively.

Table 31. Cataloging--Cataloging Paths--Average Unit Times Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Time (in minutes) Observed in Case Studies For:				
	Added Copy/ Added Volume	Original Cataloging	Cataloging with cards/card copy	"Fast-Cat", Rush or Abbreviated Cataloging	Cataloging from Automated System Records
LARGE ACADEMIC					
Case Study #1	1.52 (1289)	19.76 (361)	3.92 (2099)	15.00 (2)	---
Case Study #2	11.64 (388)	25.95 (580)	20.16 (83)[2]	10.00 (1)	10.15 (3234)[3]
OTHER ACADEMIC					
Case Study #3	NO VOLUME THROUGHPUT REPORTED FOR THESE FUNCTIONS				
Case Study #4	**	11.61 (205)	7.95 (83)	**	---
LARGE PUBLIC					
Case Study #5	2.31 (5724)	22.73 (283)[4]	12.60 (968)[4]	8.18 (74)[4]	---
REGIONAL					
Case Study #6	1.64 (746)	9.10 (105)	2.85 (545)	6.25 (4)	---
Case Study #7	7.24 (295)	11.69 (127)	9.08 (401)	---	12.79 (172)[5]
OTHER PUBLIC					
Case Study #8	2.38 (42)	3.31 (59)	3.00 (5)	2.50 (6)	---
Case Study #9	.64 (2991)	6.71 (719)	1.70 (203)	---	---
STATE LIBRARIES					
Case Study #10	3.00 (20)	14.51 (51)	---	---	---
Case Study #11	---	13.70 (181)	4.62 (355)	15.00 (1)	---

Numbers in parenthesis indicate reported volume throughput.

**No volume throughput reported.

[1] Includes theses, call number and subject heading assignment for which records appear in data base but no appropriate call number or subject heading; new commands are also included where data base record adapted to fit edition in hand.

[2] Includes preparation of workform from old LC photocopy and final preparation of manually copied workforms.

[3] Includes several uses of OCLC within the cataloging department such as updates and error reporting.

[4] Includes typing master card.

[5] Use of Ballots through an intermediary agency, on an experimental basis.

[6] Includes preparation of processing instructions.

The costs of these cataloging paths are reflective of the unit times observed in Table 31, with some correction for the level of staff performing these tasks. Expectedly, original cataloging is more costly than cataloging with cards or card copy, while the latter process is more expensive (labor-wise) than added copy/added volume routines. The most interesting conclusion from these figures, however, is the fact that within at least five of the case studies, the distinction between staffing levels doing a particular task is either non-existent, or reversed. That is, the staff performing, let us say, cataloging with cards or card copy, are higher salaried, or similarly paid as original catalogers. This is not simply confined to smaller libraries, but appears in Case Studies #2 and #5, as well as Case Studies #4, #9 and #11. As a matter of fact, the only case studies showing clear defferences in salary levels devoted to these cataloging paths are case studies #1, #6 and #8 (though the salary levels in the latter two cases devoted to cataloging with cards/card copy and added copy/added volume routines are not significantly different). Such a pattern is not expected. This lack of differential lessens the cost differences between original and cataloging with copy in those libraries performing a high percentage of original cataloging. Another interesting and expected aspect of the results within the case studies are seen in the two using automated support. Case Study #2 records lower salaried employees performing cataloging at the terminal than other cataloging paths except added copy/added volume routines, while Case Study #7 reports a higher concentration of upper salaried employees, approximating the observed salary costs of original cataloging. This is anticipated during the initial operations of automated system support, and would be expected to change at a later time.

Table 32, Cataloging--Cataloging Paths--Average Direct Labor Costs Per Unit Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Direct Labor Cost (in dollars) Observed in Case Studies For:				
	Added Copy/ Added Volume	Original Cataloging	Cataloging with cards/card copy	"Fast-Cat", Rush or Abbreviated Cataloging	Cataloging from Automated System Data
LARGE ACADEMIC					
Case Study #1	$ .18	$ 3.81	$ .54	$ 6.08	---
Case Study #2	$ .72	$ 3.05[1]	$2.43[2]	$ 1.13	$ .79[3]
OTHER ACADEMIC					
Case Study #3	NO VOLUME REPORTED FOR THESE FUNCTIONS				
Case Study #4	**	$ 2.11	$1.45	**	---
LARGE PUBLIC					
Case Study #5	$ .27	$ 3.26[4]	$1.90[4]	$ 1.21[4]	---
REGIONAL					
Case Study #6	$ .08	$ 1.20	$ .14	$ .82	---
Case Study #7	$ .67	$ 1.14	$ .86	---	$1.32[5]
OTHER PUBLIC					
Case Study #8	$ .12	$ .21	$ .15	$ .15	---
Case Study #9	$ .06	$ .91	$ .25[6]	---	---
STATE LIBRARIES					
Case Study #10	$ .27	$ 2.37	---	---	---
Case Study #11	---	$ 1.29	$ .44	$ 1.85	---

** No volume reported for these activities.

[1] Includes theses, call number and subject heading assignment for which records appear in data base but no appropriate call number or subject heading; new commands are also included where data base record adapted to fit edition in hand.
[2] Includes preparation of workform from old LC photocopy and final preparation of manually copied workforms.
[3] Includes several uses of OCLC within the cataloging department such as updates and error reporting.
[4] Includes typing master card.
[5] Use of Ballots through an intermediary agency, on an experimental basis.
[6] Includes preparation of processing instructions.

These cataloging path costs are not as alarmingly different among case studies as might immediately be surmised. By taking a weighted average unit cost,* we find that the cost differentials, though not eradicated, are not as large as suspected. Again, special caution should be taken in assuming Case Study #7 as typical. Costs as well as times are probably inflated over normal observations due to the learning curve influence. Incorporating the relative percentages of cataloging throughput processed via the five cataloging paths (added copy/added volume, original cataloging, cataloging with cards or card copy, abbreviated cataloging and cataloging from an automated system record), we find that costs vary from 10¢ (Case Study #7) to $1.78 (Case Study #10). This is not a particularly remarkable range given the diversity of the case studies. Perhaps, even more startling, is the lack of consistency in these observations within stratum, though within public libraries we find the weighted average cost to be below $1.00 in all cases. The reader is reminded that though each of these cataloging paths were considered to partition throughput into mutually exclusive sets, this was not necessarily the case in all of the studies. This was definitely not the case in Case Study #2, if we can assume that a certain percentage of materials not found in the OCLC data base is funneled through other cataloging paths. This factor, then, would act to deflate the weighted average cost because of the potential for double or triple counting. Further, the absence of volume counts for both abbreviated cataloging and added copy/added volume routines, disallows the validity of the weighted average cost of Case Study #4 from comparison with other case studies. Obviously the cost for this case study is inflated by the absence of a weighted cost factor of added copy/added volume, which is considered to be a lower cost than other paths. These data appear in Table 33.

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*Weighted Average Cost is calculated by the following means:

$$W_i = \sum_{j=1}^{j=5} P_{j_i} \times C_{j_i}$$, for Case Study i, i=1..., 11, and

Where: j =type of process (i.e., added copy/added volume, original cataloging, ...)
and C_j = average unit cost for cataloging path j, j=added copy/added volume,...
and P_j = path j throughput/total throughput

Table 33. Cataloging--Weighted average costs for combined cataloging paths.

Case Study and Library Type	Percent of throughput processed via this path					Weighted Average Cost of Combined Cataloging Paths
	Original Cataloging	Cataloging with cards or copy	Abbreviated Cataloging	Cataloging from System Records	Added Copy/ Added Volume	
LARGE ACADEMIC						
Case Study #1	9.6%	56.0%	+	---	34.4%	$ .73
Case Study #2	15.9%	2.3%	+	71.1%*	10.7%	$ 1.18
OTHER ACADEMIC						
Case Study #3	NO VOLUME THROUGHPUT REPORTED					
Case Study #4	71.5%*	28.5%*	**	---	**	$ 1.05
LARGE PUBLIC						
Case Study #5	4.0%	13.7%	1.0%	---	81.2%	$ .62
REGIONAL						
Case Study #6	7.5%	38.9%	.3%	---	53.3%	$ .10
Case Study #7	12.8%	40.3%	---	17.3%	29.6%	$ .92
OTHER PUBLIC						
Case Study #8	54.3%	4.3%	5.2%	---	36.2%	$ .17
Case Study #9	18.4%	5.2%	---	---	76.4%	$ .23
STATE LIBRARIES						
Case Study #10	71.8%	---	---	---	28.2%	$ 1.78
Case Study #11	33.7%	66.1%	.2%	---	---	$ .73

+ less than .05%
* volume extrapolated to reflect expected volume throughput, where volume counts incomplete, and given time estimates.
**No volume counts given, not included in weighted average cost.

End processing is to a degree made up of more standardized tasks which would apparently be less affected by the variance between types of materials processed, or between types of library. As Table 34 indicates, this is not an entirely accurate assumption. Certain processes such as prefiling, and filing cards appear similar across strata and library type (less than 1 minute in each case). However cataloging revision varies, for instance, from .32 minutes (Case Study #4) to 16.43 minutes (Case Study #5). This depends entirely upon the extent of revision necessary. As an aside, certain lower observations may stem from a count of all work reviewed, rather than work revised. Card production also varies considerably, and would appear to be a function of the mode of production used. For instance, in Case Study #5, the master card is prepared as part of the cataloging process, and thus the time of this card preparation is included in the time noted earlier for cataloging paths. In the case of Study #8, all cards not purchased are manually typed, thus the unit times would be higher than in institutions such as Case Study #1 where cards are reproduced with copying equipment. Card revision, as cataloging revision to cataloging, bears little relationship to the card production task time. Differences among libraries are not as great, ranging from .11 minutes (Case Study #6) to 2.04 minutes (Case Study #7); however, the high and low observations appear in regional libraries alone. Prefiling and filing of cards are clearly more similar across the libraries, ranging from .03 minutes (Case Study #1) to .9 minutes (Case Study #4). In the instance of Case Study #2, included in the observations were the sorting of cards (which are already prefiled) from OCLC. This figure then, is presumed to be lower than if the whole process of prefiling was required. The time spent is apparently correlated to the volume processed. The three highest observations (Case Studies #4, #6, and #8) had the lowest reported cards to prefile, while the two lowest observations (Case Studies #1 and #2) reported the highest card throughput. This is not entirely the case with filing of cards, which is probably a function of the number and size of receiving catalogs, as well as their respective locations. However, the range and distribution of these observations are even more closely clustered than within prefiling. Here we find that average filing times varied only from .23 minutes (Case Study #11) to .86 minutes (Case Study #4). Preparing the physical materials necessary for the material prior to shelving presents a wider and more obscure range of times. Varying from .41 minutes (Case Study #1) to 7.56 minutes (Case Study #8), the results are rather misleading, since in larger institutions preparation of labels, pockets, etc. may not entail the preparation of certain of these products (e.g. academic libraries may not use book pockets), or such preparation is divided among several members of the staff causing a double statistic, and resulting in a deflated average. Also among larger libraries mechanical production of such materials as spine labels may be time-saving. The same difficulty is met in the interpretation of average costs for actual physical preparation of the item for the shelf (i.e. affixing labels, pasting in pockets, stamping, etc.). Here, we find again a wide range from .55 (Case Study #1) minutes to 6.25 minutes (Case Study #7). Double counting occurred at least in Case Studies #1, #2, #5, and #9.

Table 34. Cataloging--End Processing--Unit Times As Observed In 11 Case Studies.

Case Study and Library Type	Average Unit Times (in Minutes) As Observed in Case Studies For:						
	Cataloging Revision	Catalog Card Production	Card Revision	Prefiling Cards	Filing Cards	Prepare Pocket, Labels, Etc.	Affix pockets, labels, stamp.
LARGE ACADEMIC							
Case Study #1	4.75 (300)	.60(41,432)	.12(25,999)	.03(154,664)	.60 (3251)	.41 (5825)	.55 (21,180)
Case Study #2	4.63 (601)[1]	1.45 (5342)[2]	1.37 (2399)[3]	.08 (42,825)	.32(24,795)	.96 (2345)	.70 (16,041)[4]
OTHER ACADEMIC							
Case Study #3	2.90 (326)	---	***	***	***	***	---
Case Study #4	.32 (62)	2.16 (732)	1.65 (212)	.90 (458)	.86 (820)	2.50 (2)	1.87 (1505)
LARGE PUBLIC							
Case Study #5	16.43 (28)	.46(42,919)	.24(12,711)	.20(14,931)	.45(17,095)	.97(15,390)	.85(14,071)
REGIONAL							
Case Study #6	1.45 (742)	.34 (4552)[5]	.11 (2712)[6]	.24 (4260)[7]	.30 (4783)	.81 (80)	4.81 (995)
Case Study #7	2.78 (1102)	4.72 (342)	2.04 (630)	.12 (5045)	.26 (7519)	.84 (1338)	6.25 (8)
OTHER PUBLIC							
Case Study #8	3.41 (22)[8]	2.49 (323)	.50 (369)	.60 (315)	.59 (85)	7.56 (86)	3.40 (144)
Case Study #9	5.30 (33)	1.66 (4258)	.91 (906)	.18 (8907)	.44 (4474)	.66 (5282)	.76 (10,786)
STATE LIBRARIES							
Case Study #10	6.37 (124)	1.06 (1114)	.24 (672)	.29 (590)	.46 (1397)	1.66 (350)	1.84 (536)
Case Study #11	1.59 (374)	1.24 (1462)	.34 (5631)	.17 (3485)	.23(12,281)	.84 (127)	.78 (842)

Numbers in parenthesis indicate reported volume throughput.
***No volume throughput reported.

[1] Includes training only.
[2] Includes inputting workforms.
[3] Includes revising prepared shelf list cards.
[4] May include multiple counts for the same items.
[5] Includes card production for other libraries.
[6] May include overlap of the added copy/added volume routines.
[7] Includes sorting cards for bibliographic center.
[8] Includes some prefiling.

Because of the limited times observed for end processing tasks, the variances are not well reflected in the unit costs for labor of end processing. With two exceptions, all unit labor costs for all tasks are below $1.00. We find also that prefiling and filing of cards is almost as standardized in costs as in observed times across libraries. Prefiling costs varied from below .05¢ (Case Studies #1 and #2) to 4¢ (Case Study #4), while filing varied from 1¢ to 5¢. The high cost of end processing would appear to be in cataloging revision (which might well be consdered a part of the actual process of cataloging) and physical preparation of the item. Card production, also, can be costly to certain libraries; this is probably dependent upon the method of card reproduction. Of course in larger libraries, the labor cost of 5¢ per card can become exorbitant when measured against the volume of cards produced.

Table 35. Cataloging--End Processing--Direct Labor Costs Per Unit as Observed in 11 Case Studies.

Case Study and Library Type	Average Direct Labor Cost Per Unit Observed in Case Studies for:						
	Cataloging Revision (in volumes)	Catalog Card Production (in cards)	Card Revision (in cards)	Prefiling Cards (in cards)	Filing Cards (in cards)	Prepare Pocket Labels, Etc.[4] (in volumes)	Affix pockets, labels, stamp (in volumes)[4]
LARGE ACADEMIC							
Case Study #1	$ .71	$ .05	$ .01	+	$ .05	$ .03	$ .02
Case Study #2	$ .51	$ .08[2]	$ .16[3]	+	$ .02	$ .05	$ .03[4]
OTHER ACADEMIC							
Case Study #3	$ .61	---	*	*	*	---	*
Case Study #4	$ .06	$ .13	$ .10	$ .04	$ .05	$ .15	$ .11
LARGE PUBLIC							
Case Study #5	$2.49	$ .05	$ .03	$ .02	$ .05	$ .10	$ .08
REGIONAL							
Case Study #6	$ .10	$ .02[5]	$ .01[6]	$ .01[7]	$ .02	$ .05	$ .31
Case Study #7	$ .31	$ .43	$ .26	$ .01	$ .03	$ .11	$ .62
OTHER PUBLIC							
Case Study #8	$ .20 [8]	$ .10	$ .03	$ .03	$ .03	$ .33	$ .15
Case Study #9	$ .65	$ .20	$ .11	$ .02	$ .05	$ .06	$ .03
STATE LIBRARIES							
Case Study #10	$1.06	$ .10	$ .02	$ .03	$ .04	$ .15	$ .17
Case Study #11	$ .19	$ .09	$ .03	$ .01	$ .01	$ .06	$ .05

+ Less than $ .005

* No volume throughput reported

[1] Includes training only.

[2] Includes inputting workforms.

[3] Includes revising prepared shelf list cards.

[4] May include multiple counts for the same items.

[5] Includes card production for other libraries.

[6] May include overlap of the added copy/added volume routines.

[7] Includes sorting cards for bibliographic center.

[8] Includes some prefiling.

F. Conclusions

A variety of conclusions can be derived from both the survey and case study data in cataloging. A clear understanding of the limitations of the data as has been mentioned must be maintained. We wish, at this time, only to make a few observations on the data discussed, and some resulting interpretations:

- The high costs of cataloging in larger institutions indicate an existing need to further provide efficient sources of cataloging, and advance the diversification of products provided by suppliers.
- The dependence upon original cataloging exhibited among other public libraries warrants further appraisal, especially in light of the fact that most of these libraries also utilize CIP data to the fullest advantage; either CIP data must be more widely available, and provided by all publishers, or states must provide access to cataloging information for smaller libraries.
- The use of automation, at least within larger libraries, appears to allow more staff time for original cataloging; if this increase in the amount of original cataloging can be further made available through networks we would expect an eventual decline in original cataloging requirements of large institutions.
- The high ratio of card per title estimates exhibited in larger libraries, and the concomitantly high cataloging cost, would indicate the need for investigation into alternatives to catalog cards, and large numbers of receiving catalogs.
- The "U-shaped" cost curve observed in cataloging (i.e. largest and smallest participants indicate higher costs) needs further clarification and study; the reasons for the higher cost observations in larger and smallest strata are different, the former may be due to "quality" of cataloging, or to the inefficiency of size; the latter may be due to start-up costs, and the processing of small batches. Solutions are not obvious, though, for the smaller library consideration of cooperative regional processing has long been forwarded.

VI. SERIALS

Serials processing, including acquisiton, cataloging and check-in, was also studied in the survey and case studies. Interest focused upon those activities which will conceivably change with increased resource sharing and the advent of automated serials cataloging and check-in support.

Serials processing is unique. Routines include the acquisition function (i.e., renewals, ordering, cancellations, claims, and invoice processing), and cataloging and inventory functions (i.e., bibliographic searching, verification, cataloging, card production, etc.) Because serials processing does overlap with other processes, many libraries do not separate this function from other departmental responsibilities within technical services. Often, in fact, periodicals control (i.e., the checking-in of issues) is under the jurisdiction of departments outside of technical services (e.g., reference). Consequently, data on serials processing could not be supplied by many of the respondents.

A. Serials Expenditures

Libraries that were able to supply separate data on serials indicate that only a small proportion of the library operating budget is devoted to serials processing. As mentioned earlier, however, responsibilities for serials are diverse and often overlap with other departments in the library. Table 36 shows the percentage of total library budgets (for general categories of operations, salaries, automation, support services, equipment rental, communications, supplies and other expenses) devoted to serials.

Table 36. Percentage of Library General Budget devoted to Serials Processing.

Type of Library	Percentage of General Library Budget Devoted to Serials, by Category							
	Total Operating Budget	Salaries and Fringe Benefits	Automated Systems	Other Support Services	Equipment Rental	Communications	Supplies	Other Operating Expenses
ACADEMIC LIBRARIES								
Large	6.4% (9)	6.8% (9)	34.0% (2)	3.4% (3)	0	3.9% (3)	5.8% (5)	5.0% (1)
Other	8.8% (13)	8.6% (13)	0	0	0	10.4% (2)	13.4% (7)	46.4% (6)
PUBLIC LIBRARIES								
Large	1.4% (4)	1.6% (4)	0	0	0	0	0	0
Regional	.9% (7)	.9% (7)	0	7.5% (1)	0	.1% (2)	1.5% (4)	4.2% (1)
Other	2.3% (4)	2.6% ( )	0	0	0	0	0	0
STATE LIBRARIES	2.3% (8)	3.4% (8)	0	.8% (2)	1.2% (2)	1.7% (2)	2.1% (3)	.9% (2)

Number in parenthesis indicates the number of libraries reporting.

Figures in this table indicate that 6.8 percent of all salary expenditures made by the nine reporting Large Academic libraries were devoted to serials processing, 34% of all expenditures in automation made by the two reporting Large Academic libraries was devoted to serials processing and so forth. As was true for other departments under examination, information beyond personnel cost was generally unavailable.

B. Serials Support Services

Support services provided through a jobber, or automated network, and procured by the library to supplant in-house tasks or reduce costs within serials processing, were not frequently observed among the participating libraries. Tables 37 through 38 summarize data on these types of support. Among the major observations that can be made from these data are:

- Six of the ten Large Academic Libraries participating indicated serial list production; two Large Public Libraries indicated serial lists; from the survey evidence, none of the remaining strata procured serials lists.
- Renewal of periodical subscriptions were services observed in each strata; most cited jobbers as sources of this service with costs ranging from 54¢ per title (in one Other Academic Library) to $4.38 (in one State Library), for the four observations which did not include materials cost.
- Serials check-in, and serials claiming, in which our studies were particularly focused, is supported only slightly within the sample: The former was supported in 11 libraries, for which unit costs averaged 23¢ per issue for the one Large Academic Library reporting this information; the latter service was reported by 13 participants for which no usable cost information was available.

Payment for existing subscriptions via an outside source was indicated by thirteen participants, representing each of the strata. Statistical reporting, as a procured service, on the other hand, was reported by three libraries, representing only Large Academics and Large Publics.

Table 37 is a summary of the services procured by Large Academic Libraries for serials processing.

Table 37. Serials Support - Large Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Claiming of late periodical issues	1	1	titles	12,000	*	*
Renewal of periodical subscriptions	2	1	titles	7,500	$7615	$1.01[1]
Serials check-in of issues	3[2]	2	issues	94,299	$18,000(1)	$ .23[3]
Paying for existing periodical subscriptions	2	1	titles	20,000	*	*
Producing serials lists	6	3	lists	26(1)	$23,000(2)	*
Statistical reports	1	1	reports	9	*	*
Price/Fund distribution	1	1	*	*	*	*

*No information available.

[1] Estimated additional cost of $1822 for supplies to support cardset system: 1974/75, 318, 798.

[2] Included anticipated system, cards produced, 9/76.

[3] Includes serials list production.

In addition, one Large Academic Library reported in-house computer support for serials processing, maintained at an annual cost of $6,000.

Table 38 shows the support services procured by Other Academic Participants for serials processing.

Table 38. Serials Support - Other Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
	Support	Data				
Claiming of late periodical issues	5	2	titles	52(2)	$237(1)	$4.84[1]
Cancelling of periodical subscriptions	5	2	titles	7(2)	*	*
Renewal of periodical subscriptions	7	4	titles	665(3)	$1009(4)	$1.21(3)
Controlling of periodical binding operations	2	1	titles	214	$6747	$31.53
Serials Check-in of issues	3	2	titles	1527	*	*
Paying for existing periodical subscriptions	3	2	titles	618(1)	$6898(2)	$14.31[2](1)

*No information available

Number in parenthesis indicates number of libraries reporting if different from column (2).

[1] Includes cancellations and renewals.

[2] Includes publication costs.

Three Large Public Libraries indicated support for claiming, and serials renewal. For one library reporting further detail, the cost of these services combined with serials check-in support and control of binding operations cost $35,000 annually. Two libraries indicated support services for subscription payment, serials check-in, control of periodical binding operations, and serial list production. One library reported support for subscription cancellations. In addition, two libraries report in-house computer support for serials processing. Developmental costs for these systems ranged from $3,000 to$25,000, while maintenance costs ranged from $1,000 to$35,000.

Two Other Regional Libraries report procuring support services for claims and subscription payments. Though no cost information was available on either service, one library reports a volume of 180 titles claimed through the service, and 700 subscriptions for which payment support services were employed. One library reports support for cancellations and renewals, as well as payment support services. The total cost of the service was $600 for 419 titles, at an average cost of $1.43 per title.

Two Other Public Libraries reported support for claiming, cancellations, renewal and payment of existing subscriptions. Eighty-one and 95 titles were supported in each of these two libraries by the system, averaging $750 annually at $9.24 per title for all services.

Three State Libraries indicate purchased support for renewal of periodical subscriptions. For the two libraries reporting volume and cost information, the average cost of the service annually was $8,293 for 493 titles. This cost included the cost of the subscriptions which average at $17.56 per subscription. In addition two state libraries reported support service for the payment of subscriptions, each purchasing an average of 800 titles through the facility. The one library reporting cost information on the service indicated an annual cost of $20,500 (which included the cost of subscription) and averaged at about $22.78 per title ordered.

C. Case Studies in Serials Processing

Since many libraries do not segregate serials from monographs during either the acquisiton or cataloging function, serials processing data from some of the case studies was impossible to separate from general acquisiton or cataloging tasks. In those instances, data are not included here.

Basic staffing characteristics of serials processing within the case studies are exhibited in Table 39. The results are unpatterned. While there appears to be a concentration of library assistants in the serials processing tasks of the Case Studies (100% for Case Studies #3, #6 and #7, professional labor is scattered. Generally, there would appear to be a higher percentage of staff time devoted to administration, supervision, meetings, unassigned time, and general office duties, than observed in either cataloging or acquisition departments. There is no clear-cut reason for this difference.

Table 39. Staffing Characteristics of the Serials Functions by Case Study

Case Study and Library Type	Percentage of total time reported spent by					Percent of total time spent in "production" activities*	Total Hours Reported
	Professional Librarian	Library Assistant	Clerk	Student Assistant/ Page	Other Employee Paid by Outside Source		
LARGE ACADEMIC							
Case Study #1**	3.4%	83.0%	6.5%	7.0%	0.0	68.6%	1384.1
Case Study #2	28.1%	41.0%	12.9%	18.1%	0.0	73.3%	3248.9
OTHER ACADEMIC							
Case Study #3	0.0	100.0%	0.0	0.0	0.0	100.0%	9.8
Case Study #4	42.4%	0.0	31.0%	26.7%	0.0	76.2%	104.0
LARGE PUBLIC							
Case Study #5	38.8%	2.9%	58.3%	0.0	0.0	60.5%	314.6
REGIONAL							
Case Study #6	0.0	0.0	100.0%	0.0	0.0	77.2%	13.2
Case Study #7	0.0	100.0%	0.0	0.0	0.0	75.0%	117.0
OTHER PUBLIC							
Case Study #8	16.1%	0.0%	34.5%	0.0	49.3%	67.3%	18.6
Case Study #9	0.0	81.8%	18.2%	0.0	0.0	100.0%**	16.5
STATE LIBRARIES							
Case Study #10	0.0	0.0	100.0%	0.0	0.0	100.0%**	31.4
Case Study #11	10.2%	41.4%	48.4%	0.0	0.0	84.0%	105.5

* Excludes time spent in administration, supervision, peer consultation, professional development, meetings, breaks, and non-task related activities.

** Administrative time for the department was not monitored, and thus "productive" percentage is somewhat skewed.

[1] Percentages do not add to 100 in some cases due to round-off error.

Due to the inclusion of both acquisiton and cataloging/inventory tasks within serials processing, these two divisions are examined separately in the following tables. Several activities within serials processing can be placed in either of the two categories (e.g., serials/periodicals control, or check-in). We have arbitrarily placed this task in the serials acquisition tasks which appear in Tables 40 and 41 .

The reader will note from Table 40, that the unit times reported for serials acquisition tasks vary from comparable results in acquisitions (shown in Table 10). However, the variance in volume throughput, along with the broader catagories of activity reflected in serials processing task analysis, would account for the inflated times above those reported in general acquisitions findings. Also, cases of exceedingly small volume throughput witnessed in serials processing further inflates activity times beyond the actual due to the round-off error in reporting (i.e., participants were asked to round-off times to the nearest five minutes).

By eliminating the two extreme observations for serials/periodicals control, or check-in, (5 minutes, and .19 minutes, for Case Studies 4 and 7, respectively), we find a significantly close range of average times: .38 minutes (in case study #3) to 1.98 minutes (in case study #8). There would appear to be a relationship between the throughput of this process and average observed times, suggesting that a middle range throughput yields an average minimum time. The reasons for this include size of files by which periodicals are controlled, coupled with enough volume to obtain efficiency of scale and batch processing. There is no definitive evidence to defend this position, however.

As mentioned in the Acquisitons Section, claims, cancellations, renewals and invoice processing include diverse procedures within each library. For this reason, conclusions on the uniformity or implications of the results as indicated in Table 40 are highly speculative. However, we cannot fail to note the lengthy process which these tasks represent.

Table 40. Serials acquiring functions as observed in eleven case studies--
Unit times

Case Study and Library Type	Average Unit Times (in minutes) by case study				
	Serials/Periodical Control	Claims	Cancellations	Renewal and Ordering	Invoice Processing
Large Academic					
Case Study #1	1.45 (5,349)	3.14(345)	3.78(115)[1]	3.42(19)	2.63(689)
Case Study #2*	1.77(12,896)	6.39(856)	9.09(590)	8.10(68)	7.51(360)
Other Academic					
Case Study #3	.38 (376)	7.86(14)	---	5.00(9)[2]	4.50(10)
Case Study #4	5.00 (2)	5.91(11)	---	2.28(500)	3.75 (8)
Large Public					
Case Study #5	.70 (5,542)	7.86(84)	18.00(5)	11.05(57)	3.93(206)
Regional					
Case Study #6	1.35 (52)	3.15(46)	---	3.00(5)	---
Case Study #7	.19 (1,110)	6.00(15)	3.67(9)	7.00(12)	---
Other Public					
Case Study #8	1.98 (86)	---	---	2.27(11)	6.67(3)
Case Study #9	.67 (964)	2.00(55)	---	10.71(7)	5.00(2)
State Libraries					
Case Study #10	1.13 (804)	7.88(26)	---	---	---
Case Study #11	1.36 (1,489)	5.70(206)	---	5.00(3)	---

Numbers in parenthesis indicate reported volume throughput.

*Case Study #2 use an automated acquisition system, which means that only manual operations are reflected here. This inflates considerably certain times, such as claiming, which is only done manually with problem requests.

[1] Includes closing-out records.

[2] Includes reviewing and writing for information concerning serials titles.

With the exception of Case Study #4 (where only two items were checked-in during the study interval), all case studies reported an average labor cost (including fringe benefits) of less than 15¢ to check-in a periodical issue. The remaining activities reflect the same disbursement observed in unit times. Perhaps of most significance to these studies was the high cost coupled with the high volume of claiming materials (between 25¢ and $1.13 per claim issued) during the three week period (varying from 11 claims to 856 claims). Ironically, the highest occurrence was observed in a library employing automation for the majority of its claims, and thus only problem or unusual claims were captured in this data collection. The high cost of issuing a claim alone would appear to warrant some outside assistance in serials control. Cancellations did not occur often with the exception of Large Academic Libraries, where an average unit cost of a cancellation was 40¢ and 56¢ for 115 and 590 cancellations, respectively.

Table 41. Serials Acquiring Functions as Observed in Eleven Case Studies--
Direct Labor Costs

Case Study and Library Type	Average Unit Direct Labor Cost by Case Study for:				
	Periodicals/ Serials Control	Claims	Cancellations	Renewal and Ordering	Invoice Processing
LARGE ACADEMIC					
Case Study #1	$ .15	$ .25	$ .40[1]	$ .36	$ .28
Case Study #2*	$ .09	$ .43	$ .56	$ .53	$ .45
OTHER ACADEMIC					
Case Study #3	$ .02	$ .38	---	$ .24[2]	$ .22
Case Study #4	$ .96	$ 1.13	---	$ .09	$ .72
LARGE PUBLIC					
Case Study #5	$ .08	$ .97	$ 2.33	$ 1.15	$ .51
REGIONAL					
Case Study #6	$ .11	$ .25	---	$ .23	---
Case Study #7	$ .02	$ .58	$ .36	$ .68	---
OTHER PUBLIC					
Case Study #8	$ .08	---	---	$ .15	$ .28
Case Study #9	$ .09	$ .27	---	$ 1.59	$ .74
STATE LIBRARIES					
Case Study #10	$ .09	$ .63	---	---	---
Case Study #11	$ .10	$ .46	---	$ .62	---

*Case Study #2 employs an automated acquisition system, which means that only manual operations are reflected here. This inflates considerably certain times, such as claiming, which is performed manually only in instances of problem claims.

[1] Includes closing-out records.

[2] Includes reviewing and writing for information concerning serials titles.

The serials cataloging function according to our definition includes bibliographic searching, verification, cataloging, changes in author/title routines and manual production of Kardex and catalog cards. We find a number of intriguing comparisons between the cataloging processes of monographs and other materials and the cataloging processes of serials. For instance, bibliographic searching and verification appears to be a lengthier process for serials than monographs. This is in part due to the lesser volume throughput, and in part due to the fewer support services procured for serials cataloging. Cataloging times were generally a little less for serials, with the exception of Case Study #5 and #8 where volume throughput was slight. Also the time for cataloging from an automated system in Case Study #2 was twice that apparent in monographic cataloging from an automated system. Again, serials throughput was far less.

Unit times for changes in author/title are high, ranging from 5 minutes (in Case Study #10) to 17.5 minutes (in Case Study #18). Costs as reflected in this task appear high as well, ranging from 40¢ to $2.28 for these two extremes.

Record production, both for Kardex and catalog files, appear far higher that those observed in cataloging. Kardex records require on the average between 2 minutes and 9.7 minutes to prepare, costing between 8¢ and 97¢ in staff labor. Similarly, catalog production for serials averaged between 1 minute (in Case Study #8) and 7.5 minutes (in Case Study #4) to prepare. Recalling that the same task within cataloging averaged between .34 minutes and 4.72 minutes, we must assume that this is at least partially due to low volume throughput.

Table 42. Serials cataloging functions as observed in eleven case studies--unit times.

Case Study and Library Type	Average Unit Times (in Minutes) by Case Study							
	Bibliographic Searching	Other Bibliographic Verification	Cataloging Serials			Change in Author/Title Routines	Manual Production	
			Original	With Cards	With System		Kardex Record	Catalog Cards
LARGE ACADEMIC								
Case Study #1	7.40(25)	5.60(213)	10.23(172)[1]	3.81(226)	---	7.19(135)[2]	3.17(868)	1.01(1500)
Case Study #2	11.10(815)	4.21(1,745)[3]	24.68(78)[4]	18.13(67)[5]	23.18(11)[6]	11.39(356)[7]	9,70(1337)	6.68(633)[8]
OTHER ACADEMIC								
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #4	2.50(4)	10.00(1)	---	---	10.00(2)	---	2.83(24)	7.50(2)
LARGE PUBLIC								
Case Study #5	10.17(29)	8.44(16)	26.67(3)	15.00(1)	---	17.50(18)	7.50(22)	---
REGIONAL								
Case Study #6	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #7	.19(550)	---	---	---	---	4.25(12)	7.82(33)	---
OTHER PUBLIC								
Case Study #8	---	---	5.00(1)	5.00(1)	---	---	2.00(15)	1.00(90)
Case Study #9	---	---	---	---	---	---	5.00(1)	---
STATE LIBRARIES								
Case Study #10	---	---	---	---	---	5.00(2)	5.00(9)	---
Case Study #11	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							

Numbers in parenthesis indicate volume throughput.

[1] Includes pre-cataloging.

[2] Includes updating and changing records of holdings.

[3] Includes checking backfile.

[4] Includes also cataloging new titles in successive entry routine for which there is no usable LC copy available.

[5] Includes LC copy as well as LC adapted copy; includes also new titles in successive entry routine.

[6] Includes only the use as a serial record a record of a monographic series cataloged as a set.

[7] Consists of closing the old title in a successive entry or ceased title routines.

[8] Includes both the inputting and revision of workforms terminal. Each workform counted as one unit.

Labor costs are patterned similarly. Combined bibliographic searching and verification range from a seemingly miniscule cost of 2¢ per title to $2.37 per title. Four of the five libraries reporting this information hover around the $2.00 range. Original cataloging was the most diverse, ranging from 21¢ per title (in Case Study #8) to $3.10 (in Case Study #2).

Table 43. Serials Cataloging Functions as Observed in Eleven Case Studies--
Unit Labor Costs

Case Study and Library Type	Average Unit Direct Labor Costs by Case Study Observed For:							
	Bibliographic Searching	Other Bibliographic Verification	Original Cataloging	Cataloging with Cards or Copy	Cataloging with System	Change in Author/Title Routines	Manual Production of:	
							Kardex Record	Catalog Cards
LARGE ACADEMIC								
Case Study #1	$ 1.23	$ .63	$ 1.74[1]	$ .50	---	$ .77[2]	$ .31	$ .09
Case Study #2	$ 1.22	$ .43[3]	$ 3.10[4]	$ 2.41[5]	$ 3.00[6]	$ .84[7]	$ .82	$ .47[8]
OTHER ACADEMIC								
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #4	$ .48	$ 1.91	---	---	$ .56	---	$ .12	$ 1.43
LARGE PUBLIC								
Case Study #5	$ 1.28	$ 1.09	$ 3.95	$ 2.22	---	$ 2.28	$ .97	---
REGIONAL								
Case Study #6	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #7	$ .02	---	---	---	---	$ .41	$ .76	---
OTHER PUBLIC								
Case Study #8	---	---	$ .21	$ .21	---	---	$ .08	$ .04
Case Study #9	---	---	---	---	---	---	$ .67	---
STATE LIBRARIES								
Case Study #10	---	---	---	---	---	$ .40	$ .40	---
Case Study #11	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							

[1] Includes pre-cataloging.
[2] Includes updating and changing records of holdings.
[3] Includes checking backfile.
[4] Includes also cataloging new titles in successive entry routine for which there is no usable LC copy available.
[5] Includes LC copy as well as LC adapted copy; includes also new titles in successive entry routine.
[6] Includes only the use as a serial record a record of a monographic series cataloged as a set.
[7] Consists of closing the old title in a successive entry or ceased title routines.
[8] Includes both the inputting and revision of workforms terminal. Each workform counted as one unit.

D. Conclusions

Though serials processing was not the major focus of these studies, a few observations seem notable:

- The high cost, not of check-in, necessarily, but of related serials processing, such as claiming, and the resulting high volume in large libraries, warrants the evaluation of alternatives available, and most particularly of automatic serials control systems.

- For the small library, there appears little evidence that investment in automatic serials control systems is warranted, either by cost, or by volume.

- The cost of serials cataloging is high, but must be considered over the entire volume represented by a single title and examined as an investment cost; present volume throughput among the case studies would not appear particularly high, nor as labor draining as some of the other processes existent in serials processing.

VII. INTERLIBRARY LOAN

Interlibrary loan has been the subject of many investigations into the costs of interlibrary cooperation, the effectiveness of networks upon interlibrary loan, and the implication of future networking endeavors upon interlibrary loan. The western states and British Columbia present a particularly significant dilemma for research in interlibrary loan and resource sharing. The vast geography and the relative isolation of many libraries in the West preclude many solutions available to densely populated regions. Further the dependence upon high resource states is perhaps heightened in the West. The impact of inexpensive telecommunications, and the advent of network services is as yet untold. Due to the magnitude of possible change within interlibrary loan in the western states with the advent of widespread network services, these studies concentrated particularly upon interlibrary loan. Beyond the investigation of costs and patterns through the Survey of Costs in Technical Processing and Interlibrary Loan, supplemented by information provided by the Case Studies, an additional survey of interlibrary loan was conducted among many of the participants in the Survey. This survey was conducted through a sampling mode intended to capture the patterns of interlibrary loan traffic (both lending and borrowing) observed over a three week period. Finally, investigations also surrounded the three bibliographic centers: the Pacific Northwest Bibliographic Center, Seattle; the California State Library Union Catalog, Sacramento; and the Bibliographical Center for Research, Denver to determine the effects and services provided by these centers as interlibrary loan facilitators.

Survey data requirements for interlibrary loan consisted of:

- budgeting and expenditures,
- staffing patterns and salary expenditures,
- lending and borrowing throughput,
- lag times,
- fill rates, and
- other patterns of lending and borrowing.

The reader is directed to the glossary of terms (Appendix E) for a full account of the definitions used in this survey for interlibrary loan. As a reminder, the following definitions of borrowing and lending are used throughout this report:

Borrowing request: a request sent to another library by the participating library for material requested by a patron of the participating library (a request was counted once regardless of the number of libraries queried for the item requested).

Lending request: a request sent from another library to the participating library for materials believed to be owned by that participating library.

A. Throughput

Tables 44 and 45 display the average borrowing and lending throughput annually by type of material. Large Academic Libraries and State Libraries reporting indicate an overall net lending throughput during the last year (i.e. they lend more from their collections than they borrow from others' collections). In general, Large Academic Libraries reported twice as much lending as borrowing, while State Libraries reported that they filled nearly twelve times as many requests from their collections as they borrowed from other libraries. Data on lending from one Large Academic Library were unavailable; this may skew the results somewhat. Among Other Public Libraries, six reported no lending to other libraries during the last reporting year. Large Public Libraries averaged 20% more borrowing than lending to other libraries. Among Other Academic and Regional Libraries the ratio was far higher, at five and four times the ILL borrowing volume reported over lending, respectively. In terms of volume, however, Large Academic and Public Libraries were the major borrowers in the sample, while State Libraries represented the major lender within the sample.

While Large Academic and State Libraries borrowed more periodical literature than book titles, the opposite pattern was existent in all other strata. Lending reflected a somewhat similar pattern with only Large Academic Libraries reporting a higher concentration of periodical requests than book requests.

Table 44. Characteristics of Filled Borrowing Requests by Stratum* -- Types of Materials.

Type of Library	Average Annual Volume Filled						
	Bookstock	Periodicals	Microforms	Audio/Visual	Government Documents	Other	Total
Academic Libraries							
Large	1912(8)	2246(8)	109(5)	9(3)	141(5)	401(2)	4343(10)
Other	197(16)	215(15)	56(8)	6(5)	54(8)	3(1)	455(16)
Public Libraries							
Large	5966(7)	174(6)	179(4)	20(2)	5(1)	0	6769(8)
Regional	2588(7)	97(5)	75(5)	23(2)	20(5)	0	2732(7)
Other	244(12)	33(11)	24(2)	57(2)	27(2)	5(1)	359(13)
State Libraries	584(5)	641(5)	54(4)	0	83(3)	0	1230(6)

*(i.e., the average number of requests made by each strata that were successfully filled)

Table 45. Characteristics of filled lending requests by stratum*--Types of materials

Type of Library	Average Annual Volume Filled						
	Bookstock	Periodicals	Microforms	Audio/Visual	Government Documents	Other	Total
Academic Libraries							
Large	3494(8)	4267(8)	310(4)	1795(3)	197(4)	625(1)	9028(10)
Other	293(14)	288(13)	26(4)	3(1)	11(2)	0	531(15)
Public Libraries							
Large	3971(7)	742(5)	38(2)	0	10(1)	0	5572(8)
Regional	645(7)	158(2)	0	15(1)	11(2)	0	695(7)
Other	348(6)	80(2)	19(2)	0	15(1)	0	364(7)
State Libraries	7392(5)	3540(5)	169(4)	6774(4)	319(4)	0	14229(6)

*(i.e., the number of lending requests which were successfully filled by stratum)

Tables 46and47 focus upon the percentage of interlibrary loans filled with photocopied or duplicated materials. The patterns are not striking as they evidence what might be suspected: Periodicals are primarily lent in photocopy form. The lending of microforms in copy was particularly limited to Large Academic Libraries (though minimally evident in Large Publics and State Libraries) where it is assumed that access to microform duplicators is more prevalent.

Table 46. Characteristics of filled borrowing requests by stratum--Percentages of photocopy/duplicates

Type of Library	Percentage of materials borrowed which are photocopied/duplicated *						
	Bookstock	Periodicals	Microforms	Audio/Visual	Government Documents	Other	Overall
Academic Libraries							
Large	.9%(8)	98.8%(8)	42.3%(5)	-	2.1%(5)	56.1%(2)	55.8%(8)
Other	0.0%(16)	82.4%(15)	2.0%(8)	3.8%(5)	.9%(8)	0.0%(1)	29.7%(16)
Public Libraries							
Large	33.4%(7)	88.1%(6)	36.5%(4)	100.0%(2)	66.75(1)	-	22.1%
Regional	.1%(7)	99.0%(5)	9.0%(5)	0.0%(2)	17.6%(5)	-	4.2%
Other	.6%(12)	67.6%(11)	100.0%(2)	9.6%(2)	6.0%(2)	100.0%(1)	12.3%(13)
State Libraries	.2%(5)	99.4%(5)	4.2%(4)	-	0.0%	-	30.4%(5)

Figures calculated against total reporting base.

Table 47. Characteristics of filled lending requests by stratum--Percentages of photocopy/duplicates

Type of Library	Percentages of materials lent which are photocopied/duplicated						
	Bookstock	Periodicals	Microforms	Audio/Visual	Government Documents	Other	Overall
Academic Libraries							
Large	.2%(8)	94.1%(8)	50.9%(4)	0.0%(3)	1.5%(4)	8.7%(1)	47.9%(8)
Other	*	97.7%(13)	0.0%(4)	100.0%(1)	0.0%(2)	-	45.3%(15)
Public Libraries							
Large	12.5%(7)	100.0%(5)	6.7%(2)	-	50.0%(1)	-	23.8%(8)
Regional	0.0%(7)	100.0%(2)	-	100.0%(1)	0.0%(2)	-	6.8%(7)
Other	2.4%(6)	40.2%(2)	0.0%(2)		0.0%(1)	-	4.5%(7)
State Libraries	.2%(5)	99.4%(5)	4.2%(4)	-	0.0%(3)	-	43.4%(6)

*less than .05%
**Figures calculated against total reporting base.

Table 47 Characteristics of filled lending requests by stratum--Percentages of photocopy/duplicates

Type of Library	Percentages of materials lent which are photocopied/duplicated						
	Bookstock	Periodicals	Microforms	Audio/Visual	Government Documents	Other	Overall
Academic Libraries							
Large	.2%(8)	94.1%(8)	50.9%(4)	0.0%(3)	1.5%(4)	8.7%(1)	47.9%(8)
Other	*	97.7%(13)	0.0%(4)	100.0%(1)	0.7%(2)	-	[illegible]5.3%(15)
Public Libraries							
Large	12.5%(7)	100.0%(5)	6.7%(2)	-	50.0%(1)	-	23.8%(8)
Regional	0.0%(7)	100.0%(2)	-	100.0%(1)	0.0%(2)	-	6.8%(7)
Other	2.4%	40.2%(2)	0.0%(2)	-	0.0%(1)	-	4.5%(7)
State Libraries	.2%(5)	99.4%(5)	4.2%(4)	-	0.0%(3)	-	43.4%(6)

B. Major Lenders and Borrowers

Each participant was asked to identify the ten most frequent borrowers (i.e. libraries requesting materials from the collections of participants) and lenders (i.e. libraries that lend materials to the participants). Tables 48 through 51 summarize the results of the responses by type and location of those libraries cited. As might be expected, the major borrowers of both Academic strata were Other Academic Libraries, while among public library strata, the major borrowers were Other Public Libraries. This is obvious from Table 48. Large Academic and Large Public Libraries reported these two strata -- Other Academic and Other Public, respectively -- most often.

Table 48. Major borrower types by strata

Strata	Number of observations as the ten major borrowers of participating libraries									
	Academic		Public Libraries			State Library	Bibliographic Center	Special Library	Other Library	Major borrower Type
	Large	Other	Large	Regional	Other					
Academic Libraries										
Large	18(8)	48(10)	3(3)	2(2)	3(1)	3(2)	1(1)	9(7)	5(4)	Other Academic
Other	4(2)	46(10)	2(1)	4(4)	10(6)	3(3)	1(1)	1(1)	8(5)	Other Academic
Public Libraries										
Large	4(2)	2(2)	6(5)	10(6)	58(10)	2(2)	1(1)	1(1)	8(4)	Other Public
Regional	0	2(2)	2(2)	15(6)	32(7)	4(4)	3(3)	0	0	Other Public
Other	0	1(1)	4(3)	6(4)	16(6)	0	0	0	3(3)	Other Public
State Libraries	2(2)	11(4)	2(2)	22(7)	25(5)	2(2)	3(3)	2(1)	9(4)	Other Public

Numbers in parenthesis indicate the number of libraries reporting.

Major lender types indicate a somewhat different pattern than that noted in Table 48, above. As Table 49 presents, Large Academic Libraries were most frequently cited by both Large Academic and Large Public Libraries as major lenders. A total of 105 citations of Large Academic Libraries were observed as major lenders to the participants, the most frequently cited type of lender.

Table 49. Major lender types by strata

	Number of observations as the ten major lenders of participating libraries									
	Academic		Public Libraries			State Library	Bibliographic Center	Special Library	Other Library	Major lender type
Strata	Large	Other	Large	Regional	Other					
Academic Libraries										
Large	51(10)	14(7)	1(1)	0	1(1)	8(5)	1(1)	4(3)	4(3)	Large Academic
Other	21(9)	52(14)	0	2(2)	2(2)	12(11)	6(6)	2(2)	6(2)	Other Academic
Public Libraries										
Large	23(7)	4(2)	9(7)	8(5)	17(7)	15(7)	2(2)	2(2)	2(2)	Large Academic
Regional	1(1)	7(4)	4(4)	18(5)	22(7)	8(8)	4(4)	0	0	Other Public
Other	2(2)	9(4)	10(5)	15(7)	13(6)	14(14)	3(3)	2(1)	1(1)	Other Regional
State Libraries	7(4)	24(9)	4(4)	3(2)	8(2)	6(3)	5(5)	2(2)	0	Other Academic

Numbers in parenthesis indicate the number of libraries reporting.

Examining the locations of major lenders and borrowers of the participating libraries, some interesting facts arise. Without exception the major borrowers of the participants are within the western states, while 10% or 47 major lenders cited were outside the West. Most of these citations were made by Large Academic and Large Public Libraries. Looking at the self-sufficiency of the West and individual western states, the following patterns emerge:

- Large Academic Libraries borrow most frequently from other libraries within the West (58% of those libraries are in the West), and 33% of the most frequently queried libraries are within their own states.

- Other Academic Libraries cited 103 most frequent lenders, of which 85% were in-state libraries and 96% were within western states.

- Large Public Libraries cited 78% of the most frequent libraries as in-state, while only an additional 8% were cited as within the remaining western states.

- Other Regional Libraries cited exclusively western libraries as most frequent lenders, with 95% of these libraries in-state.

- Other Public Libraries cited all major lenders as in-state or in adjoining states, with 84% of the citations in-state.
- State Libraries also cited as major lenders in-state libraries most often (76% of those libraries cited) with 95% of the major lenders found in western states.

Lending patterns of the participants reflect a somewhat different pattern, though without exception the majority of principal borrowers cited were in the state of the participant. The only significant volume of citations of major borrowers out-of-state were within academic strata. Large Academic Libraries noted 11% of the major borrowers in adjoining states and 2% in other western states. Eleven percent of the citations made by other academic libraries were out-of-state.

Table 50. Location of major borrowers by strata

Type of Library	Location of major borrowers cited by participants									
	Local* Libraries		Elsewhere in state		In Adjoining States		Elsewhere in the West		Outside of the West	
Academic Libraries										
Large	32	(7)	40	(8)	17	(8)	3	(2)	0	
Other	27	(10)	43	(10)	4	(2)	5	(2)	0	
Public Libraries										
Large	50	(9)	41	(7)	0		0		0	
Regional	33	(7)	22	(7)	2	(2)	1	(1)	0	
Other	15	(6)	14	(4)	1	(1)	0		0	
State Libraries	49	(10)	28	(5)	1	(1)	0		0	

Numbers in parenthesis indicate the number of libraries reporting.
*Local was defined by each participating library.

Table 51. Location of major lenders by strata

Type of Library	Location of major lenders cited by participants									
	Local* Libraries		Elsewhere in state		In Adjoining States		Elsewhere in the West		Outside of the West	
ACADEMIC LIBRARIES										
Large	9	(3)	19	(7)	21	(8)	6	(4)	29	(8)
Other	33	(13)	50	(15)	13	(8)	3	(2)	4	(3)
PUBLIC LIBRARIES	30	(9)	33	(8)	4	(2)	3	(1)	11	(4)
Large										
Regional	30	(8)	31	(6)	2	(2)	1	(1)	0	
Other	18	(9)	40	(15)	11	(5)	0		0	
STATE LIBRARIES	37	(9)	8	(4)	8	(6)	3	(2)	3	(2)

Numbers in parenthesis indicate the number of libraries reporting.
*Local was defined by each participating library.

C. Fill Rates and Lag Times

Participants were surveyed to determine the fill rates of borrowing requests, the lag times experienced from the initiation of the request to the time of response by the queried library, and the average number of queried libraries before securing a filled request. A number of interesting patterns arise. As Table 52 indicates, a surprisingly high average percentage of borrowing requests are filled in-state by all participating strata with the exception of Large Academic Libraries. Overall, Large Public Libraries reported the lowest fill rate for material they requested, followed by Other Academic Libraries. Remaining strata report average fill percentages around 85%. These averages may be somewhat misleading. For instance, the ten Large Academic Libraries report a range of 58 to 99 percent fill rate for borrowing requests; Other Academics indicate a range of 51% to 93%; Large Publics, a range of 43% to 90%; Regional Libraries, a range of 56% to 100%; Other Publics report a range of 26% to 100%; and, State Libraries indicate a fill rate ranging from 66% to 98%. These variances can not be overlooked when appraising the quality of interlibrary loan service in the West, or the potential for self-sufficiency in the western states.

Table 52. Annual Borrowing Requests by Stratum

Type of Library	Number of Requests		Fill Rate	Percent Filled	
	Total	Filled		Locally*	in State
Academic Libraries					
Large	5431 (10)	4343 (10)	84.3%	23.4% (7)	36.7% (9)
Other	742 (15)	478 (15)	73.8% (14)	36.4% (13)	87.7% (15)
Public Libraries					
Large	5915 (10)	3164 (11)	66.7% (10)	34.6% (9)	74.2% (9)
Other Regional	2412 (10)	2305 (9)	89.0% (9)	44.4% (7)	67.2% (9)
Other	869 (15)	582 (15)	84.7% (12)	59.9% (11)	91.3% (15)
State Libraries	1162 (8)	1006 (3)	85.8%	34.8% (6)	67.8% (8)

Numbers in parenthesis indicate number of libraries reporting.
*Locally was defined by each participating library.

Table 53 is a summary of the estimates given by participants as to lag times involved in borrowing from a bibliographic center, a local library (as defined by the participant), elsewhere in state, in an adjoining state, or elsewhere. We found, as might be expected, that requests issued to libraries in the state of the participant or in a local area were completed on the average of one week; within the state, on the average, within 12 days; and in adjoining states, within 18 days. Perhaps most surprising were the estimates given for the completion of a borrowing request through a bibliographic center--21 days on the average. Many reasons may be forwarded for this delay, however. Perhaps, the most powerful is that routing through a bibliographic center often includes several queries, not comparable with the time estimates given for one query of one library as are the estimates for other loan sources. For those bibliographic centers providing only location information, these lag times can be indicting; additional local library labor is required to query and process requests. Of further note is the average delay experienced by Large Publics and Regional Libraries for requests. There is no apparent reason for this difference.

Table 53. Estimated Turnaround times for Borrowing Requests

Type of Library	Days to fill a request from a: bibliographic center	library locally*	elsewhere in state	adjoining states	elsewhere	Overall Time
Academic						
Large	19 (7)	6 (9)	10 (10)	17 (9)	27 (10)	16 (10)
Other	16 (9)	4 (15)	9 (15)	13 (10)	18 (6)	10 (18)
Public						
Large	28 (8)	11 (10)	21 (10)	30 (8)	33 (7)	24 (10)
Other Regional	35 (7)	10 (8)	10 (9)	22 (6)	16 (5)	18 (9)
Other public	13 (9)	6 (13)	14 (15)	17 (9)	27 (8)	14 (15)
State Library	16 (4)	4 (7)	7 (9)	13 (9)	15 (9)	11 (9)
OVERALL	21 (44)	7 (62)	12 (68)	18 (51)	22 (45)	15 (68)

Numbers in parenthesis indicate the number of libraries reporting
*Locally was defined by each participating library.

As Table 54 also indicates, Large Public Libraries in general query more libraries before filling a request than do other strata. The reasons are not apparent for this difference. However, the reader will recall that this stratum reports a longer turnaround for filling a request (See Table 53). Large Academics and State Libraries also indicate querying more libraries than remaining strata. Whether this can be linked to the types of materials being requested by the libraries in these strata, or whether these libraries are tied to a network which requires specified libraries to be queried is unknown. The data from the interlibrary survey would not indicate the latter, since Regional and Other Public Libraries most often follow specific procedures in choosing a lending source than do other strata.

Table 54. Estimated Average Number of Passes Prior to Filling a Borrowing Request by Stratum

Type of Library	Number of Institutions Typically Queried								
	1.0-1.4	1.5-1.9	2.0-2.4	2.5-2.9	3.0-3.4	3.5-3.9	4.0-4.5	Mode	Mean
Academic									
Large (10)	1	4	1	3	1	0	0	1.5-1.9	1.9
Other (15)	6	5	3	0	1	0	0	1.0-1.4	1.5
Public									
Large (10)	1	1	2	4	1	0	1	2.5-2.9	2.3
Regional (9)	7	1	0	1	0	0	0	1.0-1.4	1.2
Other (12)	7	2	2	0	1	0	0	1.0-1.4	1.4
State (9)	2	2	2	0	3	0	0	3.0-3.4	2.0

During the survey's investigation of interlibrary loan support on a regional basis, those libraries providing ILL switching services for the region were asked to describe its patterns of regional interlibrary loan. Table 55 summarizes this information by strata. Nineteen libraries in the survey responded. The average fill rate for these regional requests was lower than those indicated generally for interlibrary loan, hovering at about 60%. We would presume that many of the patterns existent in the regional centers for the disposition of requests are similar to other libraries participating in structured networks. Regional Libraries rely heavily upon state libraries as a place of next resort, while Large Academics forward a large percentage (22%) of the requests they are unable to fill to bibliographic centers. Meanwhile, Large Publics and State Libraries appear to depend upon other libraries within their region as a place of next resort. This characterizes Large Academics as a place of last resort in a regional ILL system. Whether this pattern is reflected in other borrowing requests is unknown, however, it is doubtful. No Other Academics or Other Publics reported acting as a regional interlibrary loan center or switching center.

Table 55. Regional Center Interlibrary Loan Fill Rates and Processing Patterns.

	TYPE OF REGIONAL CENTER			
	Large Academic Libraries (3)	Large Public Libraries (6)	Regional Libraries (5)	State Libraries (5)
ANNUAL VOLUME				
Requests Received	18,472	30,900	8,069	16,905
Requests Filled	14,132	23,469	5,325	12,228
Fill Rate	57%	62%	61%	62%
REQUEST DISPOSITION			(6 libraries)	
Filled by this library	57%	51%	60%	38%
Filled by another library	1%	12%	1%	25%
Forwarded to State Library	3%	3%	21%	1%[1]
Forwarded to non-local library	8%	2%	8%	7%
Forwarded to bibliographic center	22%	3%	7%	1%
Returned to requestor with location information	7%	6%	2%	15%
Returned to requestor unfilled	1%	7%	2%	12%
Unknown	-	16%	-	-

Number in parenthesis indicates the number of libraries reporting

[1] One state library maintains a separate center which refers requests to other libraries, including the state library.

D. Interlibrary Loan Support Services

Looking to the types of outside support purchased by participants for assistance in interlibrary loan, some interesting patterns arise when compared with the borrowing and lending patterns of each of the participants. Tables 56 through 59 summarize the interlibrary loan support services reported by each of the strata. Each stratum reflects a high frequency of support services.

Table 56 indicates the type and amount of support purchased by Large Academic Libraries for interlibrary loan. Half of the libraries indicated membership in the Center for Research Libraries. Of these requests, and of the data supplied by two of the participants, average cost for a request routed through CRL was $51.26. This possibly includes prorated membership in the center, though this fact was unknown from the data reported. Recalling that the major lenders to Large Academic Libraries are distributed across the West, the high use of support by large academics for location of libraries, and participation in bibliographic centers, may be significant. That is, the capability for disbursing requests over a wider geographical area may be assisted by these services. Additionally, of course, is the need of Large Academic Libraries for current research (exhibited by their high demand of periodical literature through ILL), and materials which may be held only in a few major collections across the country. Of equal significance is the increased demand upon Large Academic collections which is often a side effect of participation in interlibrary loan support services.

Table 56. Interlibrary Loan Support--Large Academic Libraries

Type of Activity	Number of Libraries Reporting Support	Number of Libraries Reporting Data	Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Unit
Bibliographic verification	3	2	requests	1,525	*	*
Lending locations	4	2	requests	689	$ 2,500 (1)	$ 2.36 (1)
Communicating requests	1	1	requests	239	*	*
Monitoring status of requests	1	1	requests	31	*	*
Paying for ILL services	2	1	requests	183	*	*
Periodic statistics on lending and borrowing	1	1	reports	12	$ 1,800	$ 150.00
Center for Research Libraries	5	2	requests	180	$ 9,253[1]	$ 51.26[1]
Teletype	1	1	requests	4,220	$ 1,043	$ .25
Bibliographic center[2]	4	1	requests	241	$ 1,364	$ 4.00

*No information

[1] Includes membership fees.

[2] A bibliographic center would provide a variety of supportive serices including locating lenders, communicating requests, monitoring the status of requests, paying for ILL services provided by other libraries, etc.

Other Academic Libraries, though well represented in Table 57, do not indicate the diversity of support exhibited in Large Academic Libraries. Five libraries indicate support for both location information, at about $4.39 per request (as indicated in two reporting libraries), and communication of requests, at about 5¢ per request for the one library reporting cost information. Recalling that Other Academic Libraries depend largely upon western regional locations for potential lenders, the dependence upon regional bibliographic centers, and union catalog custodians for location information may be of significance. It is equally of note, that there is a wide range of costs for obtaining this service. One library reports 73¢ to obtain location information, and communications support, while the second reporting library indicates a cost of $7.99 per request for similar assistance.

Table 57. Interlibrary Loan Support--Other Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume
	Support	Data				
Lending locations	5	5	requests hours	122 (4) 25 (1)	$ 270[1] (2) $ 175 (1)	$ 4.39[1](2) $ 3.00 (1)
Communicating requests	5	3	requests	92	$ 10.50 (1)	$ .05 (1)

Number in parenthesis indicates the number of libraries reporting if different from column (3)

[1] Includes for one reporting library the cost of location and communication at 73¢ per request.

Large Public Libraries report an even wider diversity of support services for interlibrary loan. Unfortunately, the only unit cost information available on this support is from the single TWX-telecopier-delivery system noted in one library at a cost of $4.00 per transaction. Cost information on the provision of location information and billing services was unavailable.

Table 58. Interlibrary Loan Support--Large Public Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume[1]
	Support	Data				
Bibliographic verification	3	2	requests hours	* 260 (1)	$ 229 $ 1,040[1](1)	* $ 4.00
Lending locations	2	1	titles	7,200	*	*
Communicating requests	2	1	hours	780	$ 3,120[1]	$ 4.00
Monitoring status of requests	2	1	hours	52	$ 208[1]	$ 4.00
Checking availability of requested titles in library	2	1	hours	2,080	$ 8,320[1]	$ 4.00
Monitoring status of loans	2	1	hours	52	$ 208[1]	$ 4.00
Billing for ILL services	1	0	*	*	*	*
Periodic statistics on lending or borrowing	1	1	hours	26	$ 104[1]	$ 4.00
State funded employee	1	1	FTE	1	$ 9,126	*
Processing and delivery	1	1	hours	520	$ 2,080[1]	$ 4.00

Numbers in parentheses indicate number of libraries reporting if different from column (3)

*No information

[1] Cost include the cost of a TWX-telecopier-delivery system partially paid by LSCA funds.

Regional Libraries procure a significant amount of services for interlibrary loan; however, information was generally lacking regarding volume throughput or costs. Four libraries procure location information; three libraries, communications support; two libraries, verification assistance; and one library each reports assistance for checking title availability and monitoring the status of requests.

Other Public Libraries indicated support for the nine specified activities in the survey. Three libraries indicated outside services for both location information and for communication of requests to other libraries. Two libraries reported the procurement of support for bibliographic verification, monitoring the status of requests, paying for interlibrary loan services and monitoring the status of loans. One library indicated support of billing for ILL services and periodic statistics. The only cost and volume information available was reported by one library for bibliographic verification, indicating an annual volume of 15 requests, averaging a per-request cost of $5.10. No unique computer support of interlibrary loan was reported.

Interlibrary loan support services purchased by the State Library participants reflect an extensive support for bibliographic locations and lending location information. Five out of the ten reporting indicated such support. For verification, $4.00 per request was the cost of this service. Though no information was available on lending locations, one State Library reports an average cost of $4.90 for location information and communication of the request to the lending library per a single request. Two state libraries reported unique computer support of interlibrary loan. Developmental costs for these systems ranged from $4,000 to $1.1 million, while annual maintenance costs ranged from $4,400 to $320,000.

Table 59. Interlibrary Loan Support--State Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume
	Support	Data				
Bibliographic Verification	5	2	requests	2,305	$ 4,400 (1)	$ 4.00 (1)
Lending locations	5	0	*	*	*	*
Communicating requests	4	1	requests	306	$ 1,500[1]	$ 4.90[1]
Paying for ILL services	1	1	requests	2,000	$ 1,000	$ .50
Checking availability of titles in library	2	0	*	*	*	*
Monitoring status of loans	1	0	*	*	*	*
Periodic statistics on lending or borrowing	1	0	*	*	*	*
Teletype maintenance	1	1	requests	35,000	$ 15,725[2]	$ .40[2]

Number in parenthesis indicates number of libraries reporting if different from column (3)

*No information

[1] Includes the cost of locating lending libraries.

[2] Includes the cost for verification, location, communication, and monitoring the status of requests.

E. Case Studies in Interlibrary Loan

In order to formulate a finer cut of interlibrary loan costs, each of the case studies were required to obtain times and volume throughput of interlibrary loan tasks, as in some areas of technical processing. ILL activities observed were perhaps the most diverse, as well as the most difficult to discern adequate patterns within the case studies. More than any other function, routines within the individual libraries varied, and were far greater in number of distinct operations. The reader should be aware that many of the tasks within interlibrary loan, such as circulation, shelving and photocopy, are not handled by regular ILL staff. For this reason, many activities could not be captured in our studies.

A brief look at the staffing characteristics observed in interlibrary loan is helpful. Generally, interlibrary loan had a high concentration of professional labor. The most notable exception to this was in Case Study #2, where only five hours of professional time was devoted to ILL, of which all five hours were devoted to administration. Interestingly enough, this did not reduce the administrative and non-production task level. The obvious differences in the amount of time spent by each of the case studies in interlibrary loan tasks over a three-week period should be kept in mind when comparing results in following tables. We find only a small amount of time devoted to these tasks in Other Academic and Other Public Libraries.

Table 60. Staffing Characteristics Observed in Interlibrary Loan Activities in 11 Case Studies.

Case Study and Library Type	Percentage of Total ILL Time reported by:							Percent of total time spent in "production" activities*	Total Hours Reported
	Professional		Library Assistant	Clerk	Student Assistant/ Page	Other Employee Paid by			
	Librarian	Other				Library	Other Source		
LARGE ACADEMIC									
Case Study #1	22.4%	0.0	54.6%	1.3%	14.5%	7.3%	0.0	73.9%	673.5
Case Study #2	1.0	0.0	55.1%	22.9%	21.0%	0.0	0.0	74.9%	511.1
OTHER ACADEMIC									
Case Study #3	0.0	0.0	100.0%	0.0	0.0	0.0	0.0	100.0%	.1
Case Study #4	60.0%	0.0	40.0%	0.0	0.0	0.0	0.0	96.4%	9.2
LARGE PUBLIC									
Case Study #5	.2%	0.0	0.0	99.7%	.1%	0.0	0.0	96.3%	288.0
REGIONAL									
Case Study #6	28.3%	0.0	28.5%	43.0%	.3%	0.0	0.0	66.2%	421.2
Case Study #7	46.3%	0.0	53.7%	0.0	0.0	0.0	0.0	78.3%	260.3
OTHER PUBLIC									
Case Study #8	20.0%	0.0	0.0	68.4%	0.0	0.0	11.6%	91.7%	36.0
Case Study #9	72.0%	0.0	0.0	0.0	28.0%	0.0	0.0	100.0%	9.5
STATE LIBRARIES									
Case Study #10	19.0%	24.8%	4.6%	51.6%	0.0	0.0	0.0	84.8%	365.4
Case Study #11	25.3%	0.0	41.5%	33.2%	0.0	0.0	0.0	90.0%	282.0

* Excludes time spent in administration, supervision, peer consultation, professional development, meetings, breaks and non-processing related activities.

Turning first to lending operations, we may divide the observed activities into three distinct functions:

- Request receipt and reply (including verification, checking catalogs, and locating the requested item)
- Photocopying (including checking pages requested, sending to photocopy and invoicing for copying)
- Circulation (including preparing for mail, overdue routines, renewal routines, inspecting the item upon return, discharging and reshelving).

Tables 61 through 66 summarize the findings for these areas of lending within the case studies.

As Table 61 indicates, the time involved in receipt of a request is related to the volume throughput. Though economics of scale are factors, the mode in which the request was conveyed must also be considered. Though on a per unit basis this task would appear minimal, multiplied across the number of requests received in high-volume libraries, the task extends from 10.6 hours (in Case Study #11) to 18.2 hours (in Case Study #1), among those libraries reporting over 400 requests. When extended to an annual figure from this three week interval, the resulting staff time becomes costly. This latter cost becomes even more alarming when incorporating the costs of verification, checking catalogs, and replies. If verification is necessary, the costs of requests to libraries not owning the materials is at least doubled. This has serious implications for methods of communicating requests, as well as the benefits of building in guarantees to ensure ownership of the item requested. As is indicated in Table 61 up to 17 percent of the incoming requests in Case Studies Numbers 6, 7, and 11 hint at the level of further verification necessary at the lending library. This ratio might well be acceptable at the regional libraries and state libraries where their responsibilities could include verification for libraries within the region. However, even within large academic case studies, the rates ranged from six to ten percent of the incoming requests requiring additional verification. For these libraries, verification of a single request took between seven and eight minutes. Multiplied against the observed volume, Large Academic Libraries #1 and #2 devoted 16.4 hours and 2.8 hours of staff time in additional verification for incoming requests. For Cas Study #1 this represents 3.3% of the total time spent in interlibrary loan productive tasks, and represents one of the more time consuming activities within lending processes. Checking serials and other catalogs of library holdings was, for the most part, comparable across strata, with a few exceptions.

Unexpectedly, the use of a serials periodicals catalog as a location tool took more time on a per request basis than did the use of the card or other catalog of the library holdings (in all case studies where observations of both were made except #1).

Replies to requesting libraries tended to be lengthier than the receipt of the request. Though there is no evidence as to the reason for non-avilability of the materials requested, the percentage of requests to which replies were returned for non-avilability were quite high. Again this points to the costly nature of requests directed to libraries which do not own the material requested, or for some other reason, are unable to supply the requested material. In Table 61 we find that replies were issued to as much as 57% (in Case Study #7) of the estimated requests. Other percentages were: 20% for Case Study #1; 36% for Case Study #2; 56% for Case Study #5; 9% for Case Study #6; 50% for Case Study #10; and 5% for Case Study #11. In fairness to the requesting libraries, many libraries receive requests because of regional ILL structures and the policies of many libraries regarding lending which prevent circulation of certain materials, or to certain types of libraries. Our present methods for interlibrary loan location selection do not yet allow requesting libraries either to predict the availability of the item, or indeed, the accuracy of location citation tools.

Table61. Interlibrary Loan Lending Activities--Request Receipt and Reply--
Average Unit Times Observed in 11 case studies.

Case Study and Library Type	Average Unit Time (in minutes) by Case Study					
	Receiving Request	Verifying Request	Checking Serials/ Periodicals Catalog	Checking Other Catalog	Reply(if not available)	Searching Shelves, Pick-up item requested
LARGE ACADEMIC						
Case Study #1	.76(1438	6.93(142)	1.01 (268)	1.27 (248)	3.01 (284)	2.41 (670)
Case Study #2	1.80 (460	6.35 (26)	3.84 (82)	3.36 (305)	3.45 (165)	5.35 (228)[1]
OTHER ACADEMIC						
Case Study #3	1.00 (1)	3.00 (1)	1.00 (1)	1.00 (1)	2.00 (1)	---
Case Study #4	*	5.00 (1)	---	5.00 (1)	5.00 (1)	5.00 (1)
LARGE PUBLIC						
Case Study #5	1.26 (298)	5.00 (4)	2.34 (56)	2.01 (316)	2.47 (166)	3.31 (139)
REGIONAL						
Case Study #6	.59(1286)	1.40 (200)	.83 (6)	.76(1059)	.58 (121)	1.27(1834)[2]
Case Study #7	.97 (181)	8.17 (30)	5.79 (19)	1.41 (859)	1.05 (504)	1.96 (382)
OTHER PUBLIC						
Case Study #8	1.67 (3)	1.00 (3)	---	3.33 (3)	*	*
Case Study #9	2.00 (1)	2.40 (25)	---	1.58 (24)	*	.78 (9)
STATE LIBRARIES						
Case Study #10	1.69 (441)	6.16 (729)[3]	8.51 (67)[4]	.98 (461)	2.83 (262)	2.37 (126)
Case Study #11	.38(1671)	1.98 (280)	2.00 (5)	1.14 (589)	1.66 (73)	1.04 (696)

* No volume reported for these activities.

[1] Includes checking circulation files.
[2] Includes entire process of subject searching.
[3] Includes searching for locations in some cases.
[4] Includes some other message transmissions and status reports via TWX.

The costs of these activities are even further emphasized in Table 62.

Table 62. Interlibrary Loan Lending Activities--Request Receipt and Reply--Average Direct Unit Labor Costs

Case Study and Library Type	AVERAGE UNIT COST (IN DOLLARS) BY CASE STUDY					
	Receiving Request	Verifying Request	Checking Serials/ Periodicals Catalog	Checking Other Catalog	Reply (if not available)	Searching Shelves, pick-up
LARGE ACADEMIC						
Case Study #1	$ .06	$ .71	$ .09	$ .11	$ .27	$ .13
Case Study #2	.10	.35	.27	.24	.20	.27
OTHER ACADEMIC						
Case Study #3	.05	.15	.05	.05	.10	---
Case Study #4	*	.38	---	.38	.38	.38
LARGE PUBLIC						
Case Study #5	.16	.69	.30	.26	.32	.42
REGIONAL						
Case Study #6	.05	.07	.07	.06	.06	.14
Case Study #7	.09	.77	.56	.13	.08	.18
OTHER PUBLIC						
Case Study #8	.12	.07	---	.24	*	*
Case Study #9	.34	.11	---	.06	*	.03
STATE LIBRARIES						
Case Study #10	.17	.47	.63	.07	.24	.20
Case Study #11	.04	.20	.22	.11	.17	.08

* No volume throughput reported for these activities.

[1] Includes checking circulation files.
[2] Includes entire process of subject searching.
[3] Includes searching for locations in some case.
[4] Includes some other message transmissions and status reports via TWX.

Turning to the unit times and costs of photocopying for lending purposes, we note that the time invested in lending photocopies materials is generally less than the requisite time necessary for the circulation and control of lending originals. One can surmise from the data collected that the average time per request spent on photocopying tasks (including checking pages sending to photocopy, copying, and invoicing) was about 7 minutes for case Study #1; about 6 minutes for Case Study #2; 14 minutes for Case Study #5; about 16 minutes for Case Study #7; 8 minutes for Case Study #11. The largest variances in these figures occur due to invoicing, as well as to length of articles. For those giving per page results in data collection, a twelve-page average was used in estimating costs and times here.

Table 63. Interlibrary Loan Lending Activities--Photocopying--Average Unit Times Observed in 11 case studies.

Case Study and Library Type	Average Unit Times (in minutes) by Case Study for:			
	Checking Pages for Copying	Sending to Photocopy	Copying Pages Requested	Invoicing and Processing Payment for Photocopy
LARGE ACADEMIC				
Case Study #1	1.38 (336)	.52 (239)	.32 (4154)**	.73(2386)
Case Study #2	3.10 (84)	5.00 (1)	.52 (1231)**	5.18 (141)*
OTHER ACADEMIC				
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
Case Study #4	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
LARGE PUBLIC				
Case Study #5	3.79 (33)	---	7.44 (84)	2.45 (202)
REGIONAL				
Case Study #6	---	---	3.38 (40)	---
Case Study #7	3.43 (86)	6.25 (4)	.99 (629)**	---
OTHER PUBLIC				
Case Study #8	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
Case Study #9	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
STATE LIBRARIES				
Case Study #10	4.00 (5)	---	2.31 (39)	7.50 (2)
Case Study #11	1.55 (110)	---	.49 (830)**	.19 (132)

* Includes preparing photocopies for mail

** Pages, rather than requests, employed as unit base.

The same observations are emphasized in Table 64, the unit costs of these activities. In the Case Studies, the approximate unit costs corresponding to the above observations on unit times are: about 45¢ for Case Study #1; about 80¢ for Case Study #3; about $1.77 for Case Study #5; $1.54 for Case Study #7; 96% for Case Study #11. The additional labor costs beyond those of photocopying may have implications for the billing of photocopy services.

Table 64. Interlibrary Loan Lending Activities--Photocopy--Average Unit Direct Labor Costs Observed in 11 case studies.

Case Study and Library Type	Average unit direct labor cost (in dollars) by Case Study for: Checking Pages for Copy	Sending to Photocopy	Copying Pages Requested	Invoicing and Processing Payment for Photocopy
LARGE ACADEMIC				
Case Study #1	$ .07	$ .05	$ .02**	$ .09
Case Study #2	.21	.45	.02**	.34*
OTHER ACADEMIC				
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
Case Study #4	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
LARGE PUBLIC				
Case Studies #5	.49	---	.96	.32
REGIONAL				
Case Study #6	---	---	.19	---
Case Study #7	.33	.59	.10**	---
OTHER PUBLIC				
Case Study #8	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
Case Study #9	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS			
STATE LIBRARIES				
Case Study #10	.51	---	27	.52
Case Study #11	.17	---	.05**	.02

* Includes preparing photocopies for mail

** Pages, rather than requests, employed as unit base.

Circulation costs and times as displayed in Tables 65 and 66 indicate the lengthy and expensive process of lending original copies through interlibrary loan. Checking out the item itself ranged in Large Academics, Large Publics and Regional Libraries from 10.3 hours (in Case Study #6) to 20.5 hours (in Case Study #1) during the three-week period under study. In between these extremes, Case Study #2 devoted 18.2 hours to this task; Case Study #5, 12.1 hours; and, Case Study #7, 15.5 hours. This becomes somewhat more startling when extrapolated to a yearly estimate of 4.5 person weeks in Case Study #6 and at the upper extremity, 8.9 person weeks in Case Study #1. Of course, further refinement of these extrapolations to counter the uneveness of yearly demand would be necessary for unbiased results.

Preparation for mailing materials through interlibrary loan was an unusually time-consuming task in lending operations. We find in Table 65 that this procedure absorbed for high-volume lenders from between 9.9 hours (in Case Study #7) to 40 hours (in Case Study #5) during the three-week period. This finding poses some questions about our present methods of mailing and delivery systems used in interlibrary loan. Most remaining observations were closer to the higher extreme than the lower. Indeed, the observations included in Case Study #5 may reflect a more accurate estimate of unit times than those of other case studies, since mail room time was included as well as ILL staff time.

Overdue and renewal routines are performed only on a small percentage of most interlibrary loans. Observations taken during the three-week period, however, are reflected in Table 65.

Unwrapping and discharging items represent regular activities in the lending process. Often, however, the thrust of these tasks do not fall within the jurisdiction of interlibrary loan. Thus, it is not assumed that the observations taken from ILL, and reflected in Table 65 , are comprehensive, nor true indicators of the total time involved in these processes. It would appear from our findings that the combined tasks of unwrapping, inspecting, and discharging the item ranges from .5 minutes (in Case Study #11) to 7.2 minutes (in Case Study #5). Again special mention should be given to the inclusion of mail room operations in these tasks for Case Study #5. This, factor, then inflates observed times above those of other case studies of which observed times reflect only the times spent by regular interlibrary loan staff. However, even excluding the result of Case Study #5, we find the highest observation of these combined tasks to be 6.89 minutes in Case Study #10. Reshelving statistics were only obtained in five of the case studies. However, from these observations, we find a range of .3 minutes (in Case Study #11) to 1.1 minutes (in Case Studies #2 and #7.)

Table65. Interlibrary Loan Lending Activities--Circulation--Average Unit Times Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Time (in minutes) by Case Study For:							
	Check-out/ Circulate	Wrap, Distribute Prepare for Mail	Overdue Routines	Renewal Routines	Unwrap, Inspect	Discharge Item	Reshelve	Invoice and process Payment for ILL servic
LARGE ACADEMIC								
Case Study #1	2.12 (581)	2.54 (315)	1.33(150)	1.50(110)	.64(298)	1.42(1891)	---	---
Case Study #2	5.12 (213)[1]	4.50 (342)	3.19 (91)	3.89 (27)	1.34(411)	2.89 (303)	1.07 (70)	---
OTHER ACADEMIC								
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #4	5.00 (1)	5.00 (1)	---	---	---	---	---	---
LARGE PUBLIC								
Case Study #5	3.34 (217)	10.81 (222)	1.85 (27)	6.07 (14)	2.85(372)	4.30 (33)	.81 (80)	---
REGIONAL								
Case Study #6	.91 (677)[2]	.98(1822)[3]	---	2.14 (7)	.51(950)	.75 (80)	.72(1162)	---
Case Study #7	2.84 (327)	1.51 (395)	4.62 (13)	4.63 (27)	1.42(144)	1.65(221)	1.12 (161)	5.00 (1)
OTHER PUBLIC								
Case Study #8	NO VOLUME THROUGHPUT RECORDED IN THESE FUNCTIONS							
Case Study #9	NO VOLUME THROUGHPUT RECORDED IN THESE FUNCTIONS							
STATE LIBRARIES								
Case Study #10	5.50 (10)	5.00 (4)	5.00 (10)	4.78 (9)	6.89 (37)	---	---	---
Case Study #11	.71(347)	.61(3393)	1.04(1173)	1.07(169)	.16(3054)	.35(3165)	.30(1270)	---

[1] Includes filing cards into main library's circulation file.
[2] Includes typing cards for ILL Collection.
[3] Includes weighing and postmarking.

Labor costs on a per task basis for circulation were not be alarming for the most part. However, the costs for circulating/checking out an item reaches annual costs of over $1,000 for Large Academic Case Studies, the Large Public Case Study, and one of the Regional Case Studies, if we could consider the three-week interval typical. Wrapping and distributing the item for mail creates an even more costly task, according to Table 66, weighed against the high volume (including photocopied materials as well as actual circulated interlibrary loan materials.)

Table 66. Interlibrary Loan Lending Activities--Circulation--Average Unit Direct Labor Costs Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Direct Labor Cost (in Dollars) By Case Study For:							
	Check-out/ Circulate	Wrap, Distribute, Prepare for Mail	Overdue Routines	Renewal Routines	Unwrap, Inspect	Discharge Item	Reshelve	Invoice and process Payment for Services
LARGE ACADEMIC								
Case Study #1	$ .11	$ .15	$ .12	$ .12	$ .06	$ .10	---	---
Case Study #2	$ .30	$ .20	$ .20	$ .24	$ .08	$ .14	$ .05	---
OTHER ACADEMIC								
Case Study #3	NO OBSERVATIONS RECORDED IN THESE FUNCTIONS							
Case Study #4	.38	.38	---	---	---	---	---	---
LARGE PUBLIC								
Case Study #5	.43	1.37	.24	.79	.25	.56	.10	---
REGIONAL								
Case Study #6	.05	.05	---	.21	.04	.06	.05	---
Case Study #7	.26	.13	.46	.44	.12	.14	.10	.38
OTHER PUBLIC								
Case Study #8	NO VOLUME THROUGHPUT RECORDED IN THESE FUNCTIONS							
Case Study #9	NO VOLUME THROUGHPUT RECORDED IN THESE FUNCTIONS							
STATE LIBRARIES								
Case Study #10	.51	.50	.35	.46	.48	---	---	---
Case Study #11	.08	.06	.10	.09	.01	.02	.02	---

[1] Includes filing cards into main library's circulation file.
[2] Includes typing cards for ILL collection.
[3] Includes weighing and postmarking.

Though generally the volume of lending performed by the case studies was higher than that observed in the borrowing functions, we find that at least on a unit basis, the time devoted to borrowing was high: In Case Study #1, 41% of staff "production" time was devoted to borrowing activities; 41% of staff "production" time was devoted to borrowing activities in Case Study #2; 88%, in Case Study #4 (more borrowing than lending volume observed); 52% in Case Study #5; 15% for Case Study #6 (included are a number of non-ILL tasks); and 34% for Case Study #7. Remaining case studies, State Libraries, and Other Publics, represent skewed examples, in that the former are primarily lenders, and the latter are primarily borrowers.

Borrowing activities in tables 67 through 70 have been segregated into request initiation and receipt (including assistance to the patron, verification, locating a lending agency, sending the request, receipt and notification of the patron); and circulation tasks (including invoicing, processing payments, overdues, renewals, changing circulation records, and returning the item).

Table 67 summarizes the unit times observed in the case studies for request initiation and receipt. Assistance to the patron, which we know to be a time consuming task, is difficult to appraise, since the distinction between a reference question and an interlibrary request is often difficult to determine. For many of the participants, only the direct contact which the patron has with the interlibrary loan staff could be included in data collection; this would then eliminate observations of time spent by reference librarians with the patron in defining and initiating requests. However, the remaining tasks, and most particularly, verification, determination of a lending request, and preparation and issuing the request, are most topical to our concerns. The combined times of verificiation and location determination extend from two minutes (in Case Study #6) to fourteen minutes (in Case Study #7), correcting for volume variances of the two activities. Other case studies indicate averages of 8 minutes (Case Study #1), 11 minutes (Case Study #2), 9 minutes (Case Study #5), 3 minutes (Case Study #9), 7 minutes (Case Study #11), and 11 minutes (Case Study #10). These times lead one not only to the unavoidable conclusion that we, at best, need more efficient mechanisms for verification and location processes, but also that we have invested a great deal of time (and money) in the request process; we cannot afford to query several libraries unsuccessfully for a request, especially if the preparation and issuance of the request may take up to 14 minutes of staff time, and cost the library up to $1.32 in salary expense alone.

Table 67. Interlibrary Loan Borrowing Activities--Request Initiation and Receipt--Unit Times as Observed in 11 Case Studies.

Case Study and Library Type	Unit Times (in Minutes) by Case Study for: Assistance to Patron	Verification	Determining Location*	Prepare, Send Request	Receipt, and Unwrap	Checking Request Records	Notification of Patron
LARGE ACADEMIC							
Case Study #1	3.19(452)	6.23(403)	2.43(253)	1.38(511)	2.71(296)	1.73(692)	2.49(291)
Case Study #2	7.20 (66)	7.07(193)	4.22(179)	5.07(286)	3.52 (91)	5.66(121)	4.40 (83)
OTHER ACADEMIC							
Case Study #3	NO VOLUME THROUGHPUT RECORDED FOR THESE FUNCTIONS						
Case Study #4	10.00 (1)	2.86 (28)	---	2.71 (24)	1.11 (9)	.91 (11)	1.67 (3)
LARGE PUBLIC							
Case Study #5	6.30 (50)	7.52(115)	3.28 (64)	10.20(128)	2.69 (13)	7.25(178)	8.06(234)
REGIONAL							
Case Study #6	10.00 (1)	2.50 (2)	1.83 (30)	1.83(609)[1]	.90 (94)	1.81(345)[2]	1.70(135)
Case Study #7	7.50 (24)	11.96 (28)	5.00 (10)	2.11(185)	2.11 (90)	3.00(130)	2.67(80)
OTHER PUBLIC							
Case Study #8	5.68 (44)	6.37 (51)	---	2.80 (75)	2.60 (48)	2.81 (57)	2.68 (41)
Case Study #9	1.75 (20)	2.25 (20)	1.58 (12)	**	**	**	**
STATE LIBRARIES							
Case Study #10	8.33 (15)	---	---	10.77(106)	---	7.12 (52)	3.24 (34)
Case Study #11	6.47 (17)	6.45(121)	2.97 (37)	7.00(213)	4.06(187)	---	---

* If not included in verification routines.

**No volume throughput reported.

[1] Includes TWX.

[2] Includes reports to regional center and state library.

Costs for these tasks follow in Table 68

Table 68 Interlibrary Loan Borrowing Activities--Request Initiation and Receipt--Direct Labor Cost Per Unit.

Case Study and Library Type	Average Unit Direct Cost (in Dollars) Observed in Case Studies For: Assistance to Patron	Verification	Determining Location*	Prepare, Send Request	Receive and Unwrap Item	Check Request Records	Notification of Patron
LARGE ACADEMIC							
Case Study #1	$ .32	$ .87	$ .28	$ .08	$ .15	$ .15	$ .24
Case Study #2	$ .42	$ .52	$ .27	$ .25	$ .18	$ .29	$ .25
OTHER ACADEMIC							
Case Study #3	NO OBSERVATIONS IN THESE FUNCTIONS						
Case Study #4	$ .77	$ .50	---	$ .21	$ .09	$ .07	$ .13
LARGE PUBLIC							
Case Study #5	$ .81	$ .97	$ .42	$1.32	$ .35	$ .94	$1.04
REGIONAL							
Case Study #6	$1.38	$ .20	$ .15	$ .09[1]	$ .07	$ .14[2]	$ .10
Case Study #7	$ .73	$1.16	$ .44	$ .17	$ .17	$ .24	$ .22
OTHER PUBLIC							
Case Study #8	$ .24	$ .28	---	$ .14	$ .11	$ .12	$ .12
Case Study #9	$ .19	$ .24	$ .06	**	**	**	**
STATE LIBRARIES							
Case Study #10	$ .75	---	---	$ .68	---	$ .53	$ .23
Case Study #11	$ .63	$ .61	$ .22	$ .46	$ .28	---	---

* If not included in verification routines.

** No volume throughput reported.

[1] Includes TWX.

[2] Includes reports to regional center and state library.

Circulation tasks included in borrowing are reflected in Table 69. Information on these tasks is, at best, sketchy. Volume counts for most of the tasks were limited, and thus we cannot draw conclusions.

Table 69. Interlibrary Loan Borrowing Activities--Circulation Routines--Unit Times as Observed in 11 Case Studies.

Case Study and Library Type	Average Unit Times (in minutes) Observed In Case Studies For:					
	Invoicing Patron	Processing Payment	Processing Overdues	Processing Renewals	Changing Circulation Records	Returning Item (Wrap, Mail, etc.)
LARGE ACADEMIC						
Case Study #1	2.50 (82)	1.95(110)	6.09 (32)	4.22 (32)	2.05 (388)	3.76 (128)
Case Study #2	5.00 (20)	7.11 (64)	6.88 (8)	4.09 (11)	5.51 (39)	4.92 (62)
OTHER ACADEMIC						
Case Study #3	NO OBSERVATIONS FOR THESE FUNCTIONS					
Case Study #4	---	---	5.00 (1)	---	.83 (12)	1.43 (28)
LARGE PUBLIC						
Case Study #5	3.89 (45)	8.55 (69)	4.50 (10)	4.50 (20)	4.52 (62)	7.00 (60)
REGIONAL						
Case Study #6	---	---	---	1.67 (3)	2.57 (76)	.63 (32)
Case Study #7	---	5.00 (1)	---	1.92 (13)	2.52 (137)	2.83 (46)
OTHER PUBLIC						
Case Study #8	---	---	1.82 (22)	2.31 (13)	3.54 (48)	1.67 (42)
Case Study #9	NO OBSERVATIONS FOR THESE FUNCTIONS					
STATE LIBRARIES						
Case Study #10	---	---	---	---	9.00 (5)	---
Case Study #11	---	---	5.79 (19)	---	---	---

Table 70. Interlibrary Loan Borrowing Activities--Circulation--Unit Direct Labor Costs as Observed in 11 Case Studies.

Case Study and Library Type	Unit Direct Labor Costs (in Dollars) Observed in Case Studies For:					
	Invoicing Patron	Processing Payment	Processing Overdues	Processing Renewals	Changing Circulation Records	Returning Item (Wrap, Mail, Etc.)
LARGE ACADEMIC						
Case Study #1	$ .28	$ .14	$ .49	$ .31	$ .27	$ .18
Case Study #2	$ .27	$ .44	$ .37	$ .20	$ .27	$ .24
OTHER ACADEMIC						
Case Study #3	NO OBSERVATIONS FOR THESE FUNCTIONS					
Case Study #4	---	---	$ .38	---	$ .06	$ .11
LARGE PUBLIC						
Case Study #5	$ .50	$1.11	$ .58	$ .58	$ .58	$ .89
REGIONAL						
Case Study #6	---	---	---	$ .13	$ .20	$ .05
Case Study #7	---	$ .38	---	$ .19	$ .21	$ .22
OTHER PUBLIC						
Case Study #8	---	---	$ .10	$ .14	$ .15	$ .08
Case Study #9	NO OBSERVATIONS FOR THESE FUNCTIONS					
STATE LIBRARIES						
Case Study #10	---	---	---	$1.15	---	---
Case Study #11	---	$ .48	---	---	---	---

F. Interlibrary Loan Survey

The survey of interlibrary loan, both lending and borrowing, was conducted over a three-week period in a subset of the surveyed libraries. The instruments employed in this survey consisted of two log sheets:

> Interlibrary Loan Borrowing Transaction Form (Form #8): A single-page tracking document to monitor lag time type of request, queried institution, and disposition of the request for a sample of transactions received by patrons for materials owned by another library.
>
> Interlibrary Loan Lending Transaction Form (Form #9): A one-page document to monitor lag time, type of request, requesting institution, and disposition of request for a sample of transactions received from another library for material believed to be owned by the surveyed library.

For this survey, only author/title requests were considered. This exclusion of subject requests eliminated the difficulty of analyzing broad subject categories, wide date ranges, and multiple document requests. In like manner, we could maintain a control over the consistency of data and comparability of results. For borrowing, we limited our examination first-pass requests (i.e., the first institution from which the item was requested), primarily to avoid lengthy delays in completing the survey. Actual fill rates are better assessed from the survey of costs as discussed earlier. All forms were maintained by the libraries for thirty days past the inception of the request or until completion of the first pass. Because of the delays in receiving responses from lending libraries, many of the borrowing transactions were pending even after the thrity-day holding period.

Interlibrary loan requests were sampled in most of the larger libraries participating in the survey. Sampling intervals were determined according to the expected number of transactions to be initiated or received by the participants during the three week interval. Every one, third, fifth, tenth or twentieth request initiated or received by the participant during the three week period was tagged. Sampling intervals were established to capture between 50 and 75 transactions, each of borrowing and lending, among the larger participants. A maximum of 125 transactions of either borrowing or lending was established to prevent undue burden to both participants and to analysis.

Several revisions of the definitions or procedures were necessary for some of the participants. For those academic institutions whose school year ended prior to the commencement of the survey, requests were analyzed retrospectively when requested data were available. This occurred in four instances. Expansion of the definition of "first pass" was necessitated for libraries where policies specified a particular institution as place of first-resort prior to routing the request through normal ILL channels. In these cases the second queried library was also included in consideration. For libraries acting as switching centers (i.e. they issue requests for other libraries), the definition of a borrowing request was expanded to include those materials which these libraries borrow for other libraries.

The data collected for the interlibrary loan survey included:

- dates of initiation and completion of the request;
- type and date of publication requested;
- language of publication;
- issuing or queried institution type;
- location of issuing or queried institution; and
- disposition of the request.

Results of this survey follow.

The volume of borrowing requests analyzed by strata were:

- for Large Academic Libraries, 984 transactions representing 9,230 borrowing requests;

- for Other Academic Libraries, 364 transactions representing 403 borrowing requests;

- for Large Public Libraries, 358 transactions representing 2,437 borrowing requests;

- for Regional Libraries, 289 transactions representing 1,155 borrowing requests;

- for Other Public Libraries, 281 transactions representing 313 requests; and

- for State Libraries, 484 transactions representing the same number of borrowing requests.

In the following tables the weighted figures are used.

Table 71 is a summary of the fill rates observed for tagged borrowing requests. The reader is reminded that these fill rates are only for first-pass requests.

Table 71. Interlibrary Loan Survey--Borrowing Requests--Fill Rates

Type of Library	Total Requests	Number of Requests with Unknown Disposition	Percentage of Requests		
			Filled	Unfilled	Pending
ACADEMIC LIBRARIES					
Large	9,230	367	59.6%	20.6%	19.8%
Other	403	15	74.0%	16.2%	9.8%
PUBLIC LIBRARIES					
Large	2,437	221	55.6%	30.9%	13.5%
Regional	1,155	179	38.1%	4.4%	57.5%
Other	313	22	62.5%	12.0%	25.4%
STATE LIBRARIES	484	78	67.7%	12.3%	20.0%

Looking at the pattern, or directions of these requests, we find in Table 72, that primary dependence upon academic libraries as potential lenders is among Large Academics, followed by State Libraries and Other Academics. Public Libraries, however, issue requests most often to public libraries, or regional headquarters, though Large Publics and Regional Libraries also issue a high percentage of first pass queries to bibliographic centers. Percentages may be misleading, however, since in truth Large Public Library requests issued to academic libraries represent more volume than that of State Libraries or Other Academics. It is also obvious from Table 72 that both Regional and Other Public Libraries are tied closely into hierarchial interlibrary loan systems, which calls for a high dependence upon regional headquarters.

Table 72. Interlibrary Loan Survey--Borrowing Patterns

LIBRARY STRATA	PERCENTAGE OF REQUESTS ISSUED TO:						UNKNOWN	TOTAL REQUESTS
	Academic Library	Special Library	Regional Library	Other Public Library	Bibliographic Center	Other		
ACADEMIC LIBRARIES								
Large	76.0%	9.6%	3.2%	2.8%	3.2%	5.1%	573	9,220
Other	48.5%	5.0%	5.5%	12.6%	12.6%	4.0%	5	403
PUBLIC LIBRARIES								
Large	16.2%	.8%	2.1%	39.8%	35.2%	6.7%	55	2,447
Regional	8.8%	1.8%	46.9%	14.2%	20.3%	8.0%	6	1,155
Other	5.5%	4.2%	59.7%	27.3%	---	3.2%	3	311
STATE LIBRARIES	60.4%	7.8%	4.8%	7.6%	18.7%	.6%	8	484

Turning now to the reasons given for potential lender choice, four specific reasons were cited on the transaction sheets themselves: Known to have the item (of personal knowledge); union catalog indicated agency owned item; agency was likely to have it; and ILL procedures specified this agency was to be queried. The results indicate:

- Large Academic libraries use a union catalog most frequently (53.4%) to determine potential lenders, particularly for location of academic lenders (56%), regional libraries (53%) and other public libraries (84.9%); procedural specifications were most often cited as reasons for calling upon bibliographic centers (60%), while also a frequently cited reason for other academics (11%), regional headquarters (20%) and other types of agency (30%).

- Other Academic Libraries cite equally high the use of a union catalog for determining potential lenders (63% of all requests for which a reason was given); 69% of academic requests, 95% of special library requests, 86% of regional requests and 73% of public library requests were directed to potential lending candidates because a union catalog indicated ownership; 69% of the requests to bibliographic centers were sent because of procedural specifications.

- Large Public Libraries only cite a union catalog for choice of lending agency for 13% of their requests; 67% of the requests were issued to potential lenders because of procedural specifications; 77% of the requests issued to public libraries and 91% of the bibliographic center request were, in fact, due to procedural specifications; on the other hand 67% of the requests issued to academic libraries were indicated in union catalogs; 30 of the 50 requests issued to regional headquarters were known to have the item, and the remaining because of procedural specifications.

- Regional Libraries direct 77% of their requests to potential lenders because of procedural specifications, while a union catalog is cited only 6% of the time (and usually for academic locations).

- Public Libraries cited procedural specifications for 48% of their requests and the choice of a potential lender; 70% of the requests issued to regional headquarters were based on procedure, however only 8% of those requests issued to public libraries were based on procedural specification; 44% and 37% of the requests issued to academics, and publics, respectively, were based on union catalog citations; 44% and 34%, respectively, were based on liklihood of ownership.

- State Libraries cited most often (52%) union catalog indications as reason for the choice of a potential lender; 70% of the academic requests, 71% of the special library requests, and 53% of the public library requests were found in union catalogs, while only 9% of regional requests were located through union catalogs; 70% of those requests issued to regional headquarters were done so because of personal knowledge of ownership.

One can clearly conclude that the use of union catalogs among public libraries is not widespread, and that even among other strata the use of union catalogs as sources of location information is limited. This is despite the fact that, among participants, union catalog citations yielded the highest fill rates: 80% among large academic libraries for completed transactions; 88% among other academic libraries; 76% among Large Publics and regional libraries; 93% among other publics; and, 89% among state libraries. Fill rates for locations determined through procedural specifications yield a smaller fill rate for completed transactions (i.e. excluding pending requests): 75% for Large Academics, 77% among other academics, 60% for Large Publics, 93% for regional libraries (with 62% of all requests still pending), 83% for public libraries and 64% of state library requests. Further, it appears from collected data that requests issued to procedurally specified locations have a far longer turnaround than other categories of choice.

Table 73 is an examination of the fill rates observed by type of agency to which requests were issued.

Table 73. Interlibrary Loan Survey--Borrowing Requests--Fill Rates by Type of Agency Queried.

Type of Library	Type of Agency Queried for the Requested Material						
	Academic Library	Special Library	Regional Library	Other Public	Bibliographic Center	Other	Unknown
ACADEMIC LIBRARIES							
Large	62.5% (6,444)	64.5% (833)	72.5% (269)	36.2% (235)	41.4% (226)	38.4% (430)	42.2% (386)
Other	75.2% (234)	80.0% (20)	95.5% (22)	63.0% (46)	71.7% (46)	50.0% (16)	100% (4)
PUBLIC LIBRARIES							
Large	78.6% (295)	75.0% (20)	100% (30)	54.8% (938)	46.3% (357)	53.8% (160)	0 (5)
Regional	73.0% (63)	0 (20)	34.4% (515)	33.9% (165)	40.6% (202)	100% (10)	100% (1)
Other	87.5% (16)	61.5% (13)	69.1% (175)	42.7% (75)	*	60.0% (10)	50% (2)
STATE LIBRARIES	68.3% (287)	63.2% (38)	80.0% (10)	80.6% (36)	53.6% (28)	100% (3)	0 (4)

Number in parenthesis indicates the number of requests of known disposition issued to this type of agency
*No observations in this cell

One can quickly note that academic libraries can be credited with the most even and highest fill rate, generally. We should note that:

- 46% of Large Academic requests were to out-of-state locations; 52.3% of those requests to academic libraries were out-of-state; 61.9% of special library requests; 32.5% of the regional headquarter requests; 79.1% of the requests to other public libraries were out-of-state; 31% of all requests were to libraries within 100 miles of the library.

- 73% of Other Academic requests were to in-state libraries; 87% of the requests to academic libraries were to in-state locations; all 20 requests to special libraries were in-state; and 47 requests to public libraries of known location were in-state; requests to regional headquarters were all out-of-state. 28% of these requests were to libraries within 100 miles of the requestor.

- 72% of the Large Public Library requests indicating location were in-state; 49% were within 25 miles of the library; however, 93% of those requests to academic libraries were out-of-state locations.

- 82% of the Regional Library requests issued to reported locations were in the state of the requestor; only requests to academic libraries (23.6%), to public libraries (7.5%) and to bibliographic centers (64.4%) were to out-of-state locations; only 20.4% of the requests were to libraries within 100 miles of the requestor.

- 64% of the State Library requests were to libraries in-state; 88% of the academic library requests were in-state; 30 out of 37 special library requests were in-state; half of the public library requests were in-state; however only 1 out of the 23 requests to regional headquarters were in-state; 26% of the requests were issued to libraries within a radius of 100 miles of the issuing state library.

This geographic distribution should be kept in mind when appraising the turnaround times of these requests:

- 56% of the Large Academic Library requests were completed (filled or unfilled) within 15 days of the initiation of the request; 24% of the requests were not completed within 30 days; 57% of the requests to academic libraries were completed in 15 days, while 22% of those requests were either pending or completed after thirty days; 62% of the requests to special libraries were completed within 15 days, while 65% were pending or completed after thirty days; 64.7% of the requests issued to regional headquarters were completed within 15 days, while

16.5% were pending or completed after 30 days; 60% of the requests to other public libraries were completed within 15 days, 31.4% were pending after 30 days; 57% of those requests issued to bibliographic centers were completed within 10 days, and 71% within 15 days, while 11% of the requests were not completed or were still pending after 30 days.

- 57% of Other Academic borrowing requests were completed within 10 days, 73% within 15 days, while 12% were pending or completed after 30 days; 54% of those requests issued to academic libraries were completed within 10 days of initiation, and 10% were completed or pending after 30 days; 80% of those requests issued to special libraries completed within 5 days of request initiaton, and 95% of the 20 requests were completed within ten days; 15 of the 22 requests issued to regional libraries were completed within 10 and fifteen days of the request initiation, all were completed within 15 days; 44% of the requests issued to public libraries were completed within 5 days of initiation, and 83 percent within 10 days and six requests (12.5%) were pending or completed after 30 days; 46% of the requests issued to bibliographic centers were completed within 15 days, 30% were still outstanding after 30 days.

- 53% of Large Public borrowing requests were completed within 15 days of the initiation of the request, and 29% were still outstanding after 30 days; only 37% of the requests to academic libraries were completed within 15 days, and only 58% within 30 days; ten of the twenty requests to special libraries were completed between ten and fifteen days of initiation, the remaining ten were completed in an unspecified time; 50% of the requests to regional headquarters were completed between six and fifteen days after initiation, while none were pending after 30 days; 62% of the requests to public libraries were completed within 15 days of initiation, while 21% were not completed within 30 days; 48% of the requests to bibliographic centers were completed wtihin ten days, and 59% within 15 days, while 30% were not completed within 30 days.

- Only 32% of the regional library requests were completed within 15 days of initiation, while a full 61% of the requests were not completed within 30 days of initiation; 30% (28 requests) issued to academic libraries were completed within 15 days, 25% were pending after 30 days; all twenty requests to special libraries were completed within 5 days of initiation; only 9% of the requests issued to regional headquarters were completed within 15 days of initiation, while 80% were still pending or not completed until 30 days after initiation; 58% of the requests directed to other public libraries were completed within 15 days, while 18% were pending at the end of 30 days; 49% of the requests to bibliographic centers were completed within ten days, and 61% within 15 days, while 30% were pending after 30 days.

- 48% of the Public Library requests were completed within ten days, and 55% within 15 days, while 30% were pending or completed after 30 days; of the seventeen requests to academic libraries nine were completed within ten days, and 12 within fifteen days, only 2 requests were completed after 30 days; six out of the thirteen requests to special libraries were completed within ten days, while five were outstanding after 30 days; 45% of the requests to regional headquarters were completed within ten days, and 52% within 15 days, while 29% were outstanding after 30 days; 62 of the requests to other public libraries were completed within 10 days, 33% were outstanding after 30 days.

- 48% of State Library borrowing requests were completed within ten days of initiation while 25% (120 requests) were pending or outstanding after 30 days; 59% of the requests to academics were completed within ten days, while 19% were outstanding after thirty days; 21 (55.2%) of the requests issued to special libraries were completed within ten days, and 26 within 15 days; the remaining were pending after 30 days; only 2 (8.6%) of the requests to regional headquarters were completed within 15 days of initiation, while only one request was pending after 30 days (14 were of unknown lag times); 42% (15 requests) of those requests to other public libraries were completed within 5 days, while an additional 31% were completed between 6 and 10 days after requests initiation, 14% were outstanding after 30 days; 67% of those requests to bibliographic centers had unknown lag times, while of the 29 requests with known lag times, six were outstanding after 30 days, seven were completed within 5 days of request initiation, nine were completed between eleven and fifteen days of request initiation, and seven within fifteen and thirty days of initiation.

One must keep in mind that these lag times also reflect the geographical distances between lenders and borrowers. For instance, recalling that Large Academic Libraries borrow heavily from out-of-state locations we would expect longer turnarounds than among Other Public Libraries which borrow almost exclusively within state. Indeed, we find that among Large Academic Library requests that are completed within five days of request initiation 82% are from in-state locations, while those requests completed after 30 days are 62% from out-of-state locations. Among Other Academics, 99% of those requests completed within 5 days of request initiation are from in-state locations, while those completed after 30 days of request initiation are 64% from out-of-state locations. For Large Public Libraries, 88% of those requests completed within five days of request initiation were from in-state locations, and 54% were within 25 miles of the library. 63% of those requests completed after 30 days were from out-of-state locations. 90% of those requests issued by Regional Libraries and completed within 5 days were from in-state locations, although 40% of those requests to out-of-state locations were completed within ten days of initiation.

Turning now to lending requests (i.e. requests to the participating libraries from other libraries) monitored during the survey, the following volume of requests were observed during the three week interval of data collection:

- For Large Academic Libraries, a total of 1,463 requests were monitored, representing 13,190 lending requests;
- For Other Academic Libraries, a total of 636 requests were represented by 296 tagged requests;
- For Large Public Libraries 482 requests were monitored representing 2,745 requests;
- For Regional Libraries, 466 requests were tagged and weighted in results up to 2,052 requests;
- For Other Public Libraries 125 requests were tagged and included in results unweighted;
- For State Libraries, 5,100 requests represented by 543 tagged requests were included.

Table 74 displays the types of library borrowers from which these requests were issued. Recalling that Large Academics called upon special libraries considerably (see Table 72), we find that nearly 32% of the requests received by Large Academics are from special libraries. Sixteen percent of those requests received by Other Academic participants were also from special libraries. In addition, 29% of the requests received by Other Academics were issued by regional headquarters. Among Public Library stratas, however, the major borrowers of participating libraries were other public libraries. This was also the case for State Libraries, where 71% of the received requests were from either regional libraries or other public libraries. We do find an interdependence between all state libraries and academic libraries which should be noted. Recalling Table 72, a total of 287 requests (60%) of the state library requests were issued to academic libraries, while in table 74 we find a total of 594 requests duriang the three-week period being initiated by academic libraries. Of course, one must also keep in mind the number of academic libraries as opposed to the number of state libraries in the western states.

Table 74. Interlibrary Loan Survey--Lending Patterns

TYPE OF LIBRARY	PERCENTAGE OF REQUESTS FROM: Academic Library	Special Library	Regional Library	Other Public Library	Bibliographic Center	Other	UNKNOWN	TOTAL REQUESTS
ACADEMIC LIBRARIES								
Large	50.5%	31.8%	4.7%	7.3%	1.5%	4.2%	205	13,190
Other	26.7%	16.4%	28.8%	8.6%	14.1%	5.5%	17	636
PUBLIC LIBRARIES								
Large	13.0%	7.6%	15.5%	53.3%	4.4%	6.4%	70	2,745
Regional	1.1%	.6%	12.8%	73.7%	4.2%	7.7%	101	2,052
Other	5.7%	.8%	14.8%	78.7%	---	---	3	125
STATE LIBRARIES	15.3%	5.7%	24.9%	46.2%	---	7.8%	105	3,990

Investigating the fill rates of each of these strata, Table 75 displays the overall fill rate observed during the three-week period for requests received by the participants. Academic libraries, as well as the Other Public stratum, indicate the highest fill rate. However, in looking at the reasons for not being able to supply materials requested, we find an extraordinarily high rate of requests for materials not owned by the library. This is startling when coupled both with the high costs of interlibrary loan, and the long delays incurred when several passes are necessary to complete the request. For Large Academics alone, 1,884 requests were unfilled due to not owning the materials during a three-week interval. This represents nearly 51% of the requests which were not filled. Such high rates for this reason are understandable among Large Public and Regional Libraries which often receive requests because of procedural specifications, rather than foreknowledge of ownership by the issuing agency. The role of the regional library in interlibrary loan, as a switching center, may also account for the high percentage of still pending lending requests after thirty days.

Table 75. Interlibrary Loan Survey--Lending Patterns

LIBRARY STRATA	FILL RATE	REASON FOR NOT FILLING REQUEST					PENDING	UNKNOWN	TOTAL REQUESTS
		Could Not Identify	Not Owned	Item in use	Non-Circulating	Other			
ACADEMIC LIBRARIES									
Large	70.6%	1.5%	14.4%	2.3	1.4%	8.9%	1.0%	110	13,190
Other	74.6%	---	20.1%	1.1%	1.0%	3.1%	---	62	636
PUBLIC LIBRARIES									
Large	61.6%	---	16.0%	13.2%	6.2%	2.8%	.2%	6	2,745
Regional	54.8%	3.2%	21.9%	9.2%	.2%	1.6%	10.3%	1	2,052
Other	82.4%	---	6.4%	10.4%	---	.8%	---	---	125
STATE LIBRARIES	65.4%	.8%	15.3%	10.0%	.6%	2.4%	5.4%	105	3,990

By classifying these fill rates against the type of agency issuing the requests we find that:

- 71% of the requests from academic libraries to Large Academics were filled, and of those not filled, 49% were not owned by the queried library; 73% of the special library requests were filled by Large Academics, however, 46% of those not filled were not owned by the library; 63% of the regional requests were filled, while 62% of the requests not filled were not owned by the queried institution; 74% of the public library requests were filled, while 47% of those not filled were not owned; only 39% of the bibliographic center requests could be filled by Large Academic Libraries, while a full 74% of those requests which could not be filled were not even owned by the queried library.

- 78% of the requests issued to Other Academic from academic libraries are filled, while 48.4% of those unfilled were not owned; 25 requests from special libraries were unfilled, of which 15 were not owned by the queried institution; only 41% of the requests from regionals were filled, and of those unfilled 95% were not even owned by the Other Academic queried; of the 52 requests received by other public libraries, 49% were filled, one was not owned by the queried library, one item was in use, and one had an unknown disposition; only five of the eighty requests from bibliographic centers were not filled, of which all were not owned by the institution queried.

- 76% of the requests from academic libraries to Large Publics are filled, and of the remaining 35% of the unfilled requests are not owned; 63% of the special library requests can be filled by Large Publics while of the 65 requests not filled, all were not owned by the queried library; 58% of the regional headquarter requests to Large Publics were filled, while 29% of the unfilled requests were for unowned items (39% were for items in circulation); 62% of the requests from other public libraries were filled, while 40% and 36% of the unfilled requests were not owned or in use, respectively; 64% of the bibliographic center requests were filled, although, of those unfilled, only six were not owned and ten were each in circulation, or non-circulating, and an additional 15 were not filled for other reasons.

- 17 of the 22 requests from academic libraries received by the Regional participants were filled, the remaining five were not owned; all eleven of the requests from special libraries were filled; 54% of the regional requests were filled, while of those unfilled, 38% were not owned and 44% could not be identified (recall the special responsibilities of regional libraries, as switching center and support back-up for other libraries in the region); 54% of the other public library requests, were also filled, while 65% of those unfilled were not owned by the queried library; 50 out of the 81 requests from bibliographic centers were filled, while 20 requests were for materials not owned, and eleven were of unknown disposition.

- All seven of the requests from academic libraries to Other Publics were filled; the one request from a special library was for material which was in use; thirteen of the eighteen requests from regional headquarters were filled, while one was not owned, three were in use, and one was not loaned for other reasons; 84% of the 96 requests from other publics were filled, while seven requests were for materials not owned, and eight for materials in circulation.

- 77% of the requests from academic libraries to State Libraries were filled, while of those unfilled, 62 % were not owned; 65% of the special library requests were filled, while of those requests returned unfilled, none were owned by the library; 51% of the requests from regional headquarters were filled, and of the remaining, 60% were not owned by the State Library; 66% of the requests from other public libraries were filled by the State Library, while 38% and 37% were not owned or in use, respectively.

One must keep in mind the special responsibilities of most of the Regional, Large Public, and State Libraries in interlibrary loan networks throughout the western states. That many are queried as a matter of policy, and not on the basis of potential ownership of an item should be weighed against the findings of the ILL survey. However, one should also balance this against the fact that academic libraries tend to have a higher success rate than do other types of libraries singled out in the survey, and the fact that ILL costs are high for the lender, regardless of whether a request can be filled or not.

Having discussed the types of agencies requesting materials through ILL of participating libraries, a cursory examination of the geographical locations of these libraries in relationship to the participant is of interest. We find that:

- 56% of the requests to Large Academics are from libraries within 100 miles, while 29% are over 400 miles away; 41% of the academic libraries were outside a 400-mile radius; 46% of the special libraries, however, were within 25 miles of the institution; 45% of the regional headquarters were within 25 miles, and 76% within 100 miles; 37% of the public libraries were equally within 25 miles or more than 400 miles from the institution.

- 54% of the requests to other Academic Libraries are issued from agencies within 100 miles while 25% are over 400 miles away; 25% of the requests from academic libraries are from libraries within 100 miles, while 28% are outside a radius of 400 miles; 34% of the special libraries are within a radius of 25 miles while 40% are between 100 and 400 miles from the institution; 61% of the requests from regional libraries are issued within 25 miles of the institution; 39 of the 52 requests from other public libraries are issued from libraries between 25 and 100 miles away from the institution.

- 50% of the requests issued to Large Publics came from libraries within a radius of 100 miles from the library; 50% of the academic library requests, however, are issued by libraries over 400 miles from the library; 99% of requests from special libraries were from within 100 miles of the Large Public receiving the request; 57% of the regional requests were from libraries within 100 miles; 27% of the requests from public libraries were issued from libraries more than 400 miles away, while 29% were from libraries within 25 miles of the receiving library.

- 67% of the requests received by Regional Libraries were from libraries within 100 miles of the library; 15 of the 22 requests from academic libraries were from libraries within 25 miles; ten of the special library requests (11 total) were from a library within 25 miles; 82% of the requests from regional headquarters were issued by libraries between 100 and 400 miles away; 70% of the public library requests were from libraries within a radius of 100 miles of the regional library.

- 47% of the State Library requests came from libraries within 100 miles of the capital; only 10% were from locations more than 400 miles away; 30% each of academic library requests were issued from libraries within 25 miles, between 25 and 100 miles, and between 100 and 400 miles away; 36% of the special library requests were issued within 25 miles of the state library, and 56% within 100 miles; 39% of the regional requests to the State Library were from locations within 25 miles of the State Library; 54% of the public library requests hailed from locations between 100 and 400 miles of the State Library.

From the ILL survey data, one can easily perceive the interdependence of western libraries.

G. Bibliographic Centers and Interlibrary Loan Support

As a part of these studies, examination was given to the roles of three bibliographic centers within the West-- the Bibliographical Center for Research (Denver, Colorado), the Pacific Northwest Bibliographic Center (Seattle, Washington), and the California State Library Union Catalog (Sacramento, California). Each center maintains a union catalog, and acts as a facilitator for interlibrary loan in their respective regions. The Bibliographic Center for Research (BCR) has among its membership the states of Colorado, Kansas, South Dakota, Utah and Wyoming. Recently Iowa also joined BCR. The Pacific Northwest Bibliographic Center (PNBC) has state membership from Washington, Alaska, Montana and Idaho. In addition, institutional membership includes agencies from the state of Oregon and the province of British Columbia. The California State Library Union Catalog (CSLUC)provides service to libraries within that state. Each of three agencies maintains a union catalog of long standing and has historically provided interlibrary loan service to participating libraries. California provides the regular ILL lending of materials from its own collection, and location information from the union catalog. The other two centers do not maintain a collection; however, each processes interlibrary loan requests by routing the request to, or providing location information of, potential lenders in the region, and elsewhere. PNBC also utilizes the University of Washington collection. All copying and retrieval of the University of Washington collection is performed by PNBC staff.

Income for the Interloan service of BCR and the services of PNBC is generated on membership fees based on utilization; for CSLUC the services are paid for through the state library. Membership fees for BCR are $4.00 per request, $7.00 for priority service (i.e. processing within 48 hours), and $7.00 for circulation (determining locations through sources outside normal channels for instance, the National Union Catalog). Requests requiring both special services (i.e. priority and circulation) are charged at $10.00 per service transaction. Discounts of 3%, 2%, or 1% are given for prepayment annually, semi-annually, or quarterly, respectively. Revenues for 1974-1975 were $151,399, and expenditures were $136,753. For PNBC, membership in the past has been based on state population; however, during 1975-1976 the PNBC board decided to base membership fees upon utilization. Unlike the pricing schedule used by BCR on a per transaction basis, fees are collected on annual use during the past fiscal year. This averages to an estimated $3.61 per request, and makes no distinction between rush or circularized request. Income to PNBC during the fiscal 1974/1975 year was $198,194 which averaged to about $3.10 per request.

As we have observed in earlier sections the bibliographic centers represent both heavy borrowers of, and lenders for, participants in the survey. The union catalogs maintained by each center represent a wealth of holdings data unavailable elsewhere in the region. CSLUC contained approximately 2,178,700 unique entries (or titles) at the end of 1975; BCR, 1,545,680 titles; and PNBC, an estimated 1,584,700 titles. million cards and 3,428,800 cards were held by BCR and PNBC, respectively, representing 18 million and 6.5 million locations. Growth of these catalogs continues at a phenomenal rate, with BCR adding 606,177 (subtracting withdrawals) new cards during fiscal year 1974/75; CSLUC, 259,247 (subtracting withdrawals); and PNBC 311,630. The question of growth becomes clear when one realizes that each of these operations is manual and that maintenance of the catalogs is necessarily labor-intensive. During the current year, BCR has included the use of OCLC, relieving much of the labor-intensive requirements of manual files. Before any decisions upon how these files should be handled, a realization of the dependence upon these files within their respective regions is necessary. Though it maintains a larger file, the demand upon BCR is less than that observed at PNBC. During the FY 1974 PNBC received a total of 63,846 requests, while during calendar year 1975 BCR received 16,063 (a 27% decline over calendar year 1974). During fiscal year 1975 BCR received 20,970 requests, and during fiscal year 1976, 9742 requests--a decline of 54% requests. PNBC, on the other hand, has been experiencing increases in demand (32% during fiscal year 1974). Whether this demonstrates a difference in the needs of the two regions, or is a result of services rendered is unclear.

Find rates of the PNBC catalog indicate that between 50 and 56% of the requests can be supplied with location information from the union catalog; of those remaining, 60% can be located in the University of Washington catalog. This is a particularly high find-rate when weighed against the evidence of the survey data which indicates that many libraries automatically issue borrowing requests to the bibliographic centers because of procedural specifications, and not because of the likelihood that these centers can locate the type of material requested. In surveying the types of materials which are requested, date of publication was an element of investigation both during the ILL survey and in a survey of incoming requests to PNBC. From our ILL survey data, we found that demand for materials published in recent years was highest: For borrowing request, 59.5% of Large Academic requests were for post-1959 publications, 63.6% of the Other Academic requests, 45.1% of Large

Public requests, 73.5% of Regional Requests (53.2% were post-1969 requests), 52.1% of Other Public Requests, and 78.5% of State Library requests (59.5% were for publications published after 1969); for lending requests, 50.1% of Large Academic requests were for post-1969 publications, 39.4% of Other Academic requests (43.4% of Other Academic requests were for materials dated 1950-1959), 33.5% of Large Public Library requests (58.3% of the requests were for items published since 1960), 49.2% of the Regional requests, 31.2% of the Other Public requests (44.8% had unknown dates of publication), and 43.4% of the State Library requests (62.9% were for publications dated after 1959). In examining requests to PNBC, two separate surveys (one conducted as part of these studies, and one conducted in 1972), indicate that at least 50% of the requests were for materials published within ten years of the request. Our ILL survey would tend to confirm this demand pattern. Since there is no reason to suspect that the requirements of the other union catalog custodians are far away from this pattern, the implications for file conversion are obvious.

A cursory examination of the material types requested through interlibrary loan may be helpful in placing the bibliographic centers in perspective. Though the union catalogs of these centers do contain serial entries, the major emphasis is upon monographic literature. Via our ILL survey instrument, we segregated requests into the following types of material:

- Government documents,
- technical journals,
- technical reports,
- other non-fiction,
- classical fiction,
- popular fiction,
- non-technical/popular periodical,
- audio and/or visual material, and
- other material.

While among public libraries, the major category of borrowing requests were for other non-fiction (63.9% for Large, 66.6% for Regional, and 49.4% for Other), Academic Libraries reflect higher percentages of journal requests (39.3% for Large and 37.4% for Other). Forty three percent of the State Library requests were for journal literature. Similar patterns were reflected in lending requests as well. Thus, we would assume that public libraries may gain a slight advantage over academics in the use of the union catalogs maintained by the centers. Another point to be made from ILL survey evidence as regards the bibliographic centers is: There appears to be no significant evidence to indicate that libraries using a bibliographic center are less likely to verify the requests than requests issued to other lending agencies.

Nor would it appear that Other Public Libraries frequently (in our survey, at all) use the bibliographic center directly.

Assessing the factors of demand, and the costs of maintaining the manual operations of the union catalogs is particularly problematic. We find that filing into the three catalogs of BCR to be 200-250 cards per hour into the pre-1956 file, and about 300 cards per hour in the 1956-1965, and post-1965 files. Moreover, the last two years of card contributions are unfiled. Similarly, PNBC reports a rate of 430 cards per hour for an experienced filer to file into their catalog (and 137 cards per hour for a new employee filing into the catalog). PNBC maintains a divided catalog with post-1967 publications separated in each drawer from other publications. Annual record maintenance requirements indicate that approximately 1.6 person-years devoted to union catalog updating and maintenance at PNBC. However, this represents only about ten percent of the total manpower. Searching, in fact, represents the major effort at both PNBC and BCR. Here, we find that the time per search reported by BCR averaged ten minutes of professional time; at PNBC the average time to search the union catalog was 2.5 to 3.6 minutes, 2.0 and 2.4 minutes per search of the University of Washington catalog, and for extended searches (including searches of book catalogs, microform catalogs and serials lists) 7.3 to 11.8 minutes. Extended searching of all catalogs and possible verification sources averaged 31 minutes.

The question of the bibliographic centers as interlibrary loan facilitators is a serious one. With the advent of automation, the existence of manual union catalogs is an enigma: the continued demand for services provided by the centers is obvious, and yet the availability of location information through network services such as OCLC is diminishing the need for these files. For smaller libraries which are yet to have access to automation, these bibliographic centers, or a comparable replacement, would appear essential. Further, the cost of borrowing (including the cost of re-routing requests) is high; and, the lack of viable bibliographic and location sources to the small library is significant. The dilemma is obvious; unless a practical substitute for the skilled manpower and union catalog resources provided by these centers can be established, the responsibilities of these centers can neither be abrogated nor abolished. However, considered study is necessary to determine what efficient interfaces will exist between these centers and the growing network services in the western region. Conversion of recent imprinted records with a small staff to continue the processing of requests for older materials is a possibility; the close of these files and conversion to a printed catalog is another; the expansion of the center to include diverse services to prevent these centers from becoming an anachronism has already been effective in the case of BCR; or the gradual dissolution of these centers. For many, none of these alternatives are desirable nor viable. However, careful study of what role these centers are to play in the future is imperative.

H. Conclusions

There are many conclusions which one can draw about interlibrary loan, and the trends which will appear in the future. However, for our purposes, a few need highlighting:

- the cost of lending and the time lags of borrowing prohibit the continued request of materials not owned by the queried library;
- the low fill rates experienced by those libraries requesting materials of institutions based on procedural specifications should be weighed against the "value" of directed networks, the lag times encountered by the use of intermediaries, and the "total system costs" of requests;
- the role of bibliographic centers and regional headquarters within directed networks needs further evaluation, as do reimbursement policies for these services, especially at the regional headquarters level.
- planning for the role of automated networks within directed networks is essential;
- smaller libraries need greater access to bibliographic tools for interlibrary loan use; and
- a concerted effort to formulate the role of union catalogs within bibliographic centers, and plan for a phased development into that role is necessary.

VIII. SUPPORT SERVICES

In addition to the support services procured by participants for technical processing and interlibrary loan, support for reference, circulation and other functions of the library were examined. Similarly, the services provided by these participants for other libraries were scrutinized. This examination was not only to determine the work load and funding of participants, but to look also at the extent of regional cooperation already existent in the western area. We found that cooperation was high, and indeed, an unexpected amount of support was supplied by Large Academic Library participants to other type libraries. The following sections cover both support procured and support provided.

A. Circulation Support Services Procured by Participants.

Circulation support was observed most frequently in Large Academic Libraries, where, as Table 76 indicates, twelve distinct functions were supported. For the one library reporting cost information on circulation support, an average cost of 3¢ per circulation was noted. This cost included overdue and hold processing, as well as statistics on circulation .

In addition, four of the Large Academic Libraries reported unique computer support of circulation. Unique computer support was defined as a system developed especially for the participating library, and maintained either by the library, parent institution, or system developer. Cataloging support provided by OCLC, for example, would not be considered unique computer support. Two libraries reported development costs ranging from $500 to $44,000. Annual maintenance costs for these systems ranged from $500 to $100,000, averaging $44,609 for all four systems reported.

Table 76. Circulation Support--Large Academic Libraries

Type of Activity	Number of Libraries Reporting Support	Data	Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume
Maintaining records of users borrowing items	3	2	borrowers	30,963	$ 7,597[1](1)	$ .64[1](1)
Identification of circulating materials	2	1	volumes	221,069	*[2]	*[2]
Placing holds on circulating materials	1	1	volumes	4,977	*[2]	*[2]
Notifying users of overdue materials	2	1	volumes	12,295	*[2]	*[2]
Computing fines on overdue materials	1	1	volumes	36,887	*[2]	*[2]
Billing users for overdue materials	1	1	users	12,294	*[2]	*[2]
Producing periodic statistics on circulation	2	1	reports	2,764	*[2]	*[2]
Follow-ups on indefinite loans	1	1	volumes	6,000	$ 360	$ .06
Recalls	1	0	*	*	*	*
Microfiche shelflist	1	1	*	*	$ 64,000[3]	*
Microfiche daily circulation lists	1	1	volumes	375,000	$ 8,500	$ .02
Delinquent penalties	1	1	volumes	1,540	*	*

Number in parenthesis indicates number of libraries reporting if different from Column (2).

*No information.

[1] Includes circulation control, holds, billing, overdues, statistics and listing items for individuals or departments.

[2] Cost included in Line Entry (1).

[3] Includes $33,000 subsidy.

One Other Academic Library reported circulation support for maintaining records of users borrowing items, and for notification of users holding overdue materials, No cost information was available for either of these support services. One Other Academic Library reported the use of an in-house circulation system. Developmental costs for the automated system were $6,000, and annual maintenance costs for maintenance were $2,400.

Two Large Public Libraries indicated circulation support for identification of circulating materials, computation of fines, and statistics. Costs for these functions as indicated by one of the libraries reporting for each function were: 4¢ per volume of circulating material, at an annual volume of 260,000; 1¢ per circulation for the computation of fines for a circulation of 3,180,000 volumes; and $4.65 per hour for the production of statistics, amounting to 104 hours of staff time annually. In addition, single observations were made of circulation support for notification of users of the status of their holds, notification of overdues, billing for overdues, and producing circulation cost statistics. No cost or volume information was available on these services.

One Regional Library reported a Regiscope circulation system, with an annual cost during 1975/1976 at $2,501. No other circulation support was indicated. No support was indicated in Other Public Libraries or State Libraries.

B. Reference Support Services Procured by Participants

Large Academic Libraries indicate the highest level of support in Reference, followed by Large Public Libraries. Other Publics and Regionals indicated no supported reference services. The average cost of data base searches upon request ranged from $7.39 for Large Academics and $12.75 in Other Academics, to $100.00 for State Libraries. The high cost experienced by the state library reporting this information may be attributed to the low volume reported (five searches) compared to the high volume of the Large Academic Libraries (an average volume of 2,397 searches annually). However, this must be countered with the fact that the two Other Academic Libraries reporting cost and volume information, averaged only $12.75 per search. Naturally the cost of data base searching depends greatly upon the number of citations received, and the method by which such searches are performed. In the case of the state library reporting, the costs incurred included printed citations and billing.

Table 77 is a summary of the support services received by Large Academic Libraries for reference service. Large Academics indicated a far higher volume of searches and a far more widespread service level than that exhibited in other strata.

Table 77. Reference Support--Large Academic Libraries

Type of Activity	Number of Libraries Reporting		Units Employed	Average Annual Volume	Average Annual Cost	Average Cost Per Volume
	Support	Data				
Data base searches upon request	6	5	searches	2,397	$11,978 (3)	$ 7.39 (3)
Periodic on-going searches of data base	5	4	SDI profile searches	1,834 (3 75 (1	$ 2,000 (1) $ 6,340 (1)	$ 2.94 (1) $ 26.67 (1)
Producing printed citations from data base searches	5	3	citations	111,373	$ 1,139 (1)	$ .01 (1)
Billing for data base services	2	1	bills	360	$ 282	$ .78
Statistics regarding data base usage	1	1	reports	4	$ 72	$ .18
Computer produced indexes	1	0	*	*	*	*
Map catalog production	1	0	*	*	*	*

Number in parenthesis indicate number of libraries reporting if different from column (3).
*No information

Two Other Academic Libraries reported support for data base searches as already mentioned. In addition, one Other Academic Library reported 35 hours of reference center support charged at $6.57 per hour.

Among Large Public Libraries, two reported data base searches upon request, the production of printed citation, and billing for data base services. In addition one of these libraries reported the production of statistics regarding data base searches. The latter reported a total of 800 hours involved in this service, all of which is patron reimbursed. One other Large Public reported reference center support, to which 216 questions were directed during the last reporting year. No cost information was available.

One Regional Library provides data base searches upon request, however, no data was available on volume or cost of such searches. No other reference support is provided to participating regional libraries.

Two Other Public Libraries report contracting for reference support for: Data base searches upon request, production of printed citations, and production of usage and cost statistics. In addition, one library provides for periodic on-going searches, and for billing of data base services. No cost or volume information was available on services. Due to the size of these two libraries, it would appear that both libraries procure these services either through the State Library or a regional center. One Other Public also cites the occasional procurement of manual reference searches.

Three state libraries reported data base searches upon request. The cost and volume results have already been mentioned. In addition the production of citations and billing for these searches were included in the services procured by one of these libraries.

C. Communications Support and Costs Procured by Participants

Via the survey instrument, equipment requirements and costs, particularly those tied to automated systems and interlibrary communications, were examined. Equipment and communications given special attention were:

- Telex: an automated teleprinter exchange switching service provided by Western Union.
- Teletype Exchange Service (TWX): an automatic dialed teleprinter exchange switching service provided by Western Union on a commercial toll basis.
- Datatel(or Datel): data or high-speed telegraph system coordinated with voice connections.
- Other Teletype Services
- Facsimile (FAX) Transmission
- Dataphone: data or high-speed telephone system.
- Line Charges, Leased Lines, or Other Means of Communication
- Telephone (other than above)
- Other Communications

For each of these categories of communication, costs for rental, maintenance, supplies and communications were requested. Further cost information was gathered on copying costs, including equipment rental, supplies, and maintenance for internal library uses (excluding those services which are patron reimbursed, or entirely for public use.) Data collected on these categories are summarized in Table 78. As is indicated, the use of certain communications media is limited to only a few of the strata, while TWX, telephone, and other communications costs were observed in each stratum. Telex was reportedly used only in one Other Academic Library and two State Libraries. Out of the 59 libraries reporting in these categories, only one Large Academic Library reported the use of Datatel. One Large Academic and one State Library indicated dataphone use. Only four Large Academic Libraries, and one State Library reported payment for the use of a remote access terminal. This may be misleading, since there is evidence that other participants have remote access terminals for which the library does not pay. The large costs that communications represents is reflected in the following table where expenditures during the last reporting year varied from $3,473 in Other Academics to $62,553 in Large Academics. These costs represent a sizeable proportion of the average budgets reflected in Section III. For the most part, telephone costs represented the largest part of these costs. However, the costs reported by State Libraries using Telex ($12,005 annually) and Dataphone ($15,800 annually) represent significantly high expenditures. For Large Academic Libraries using remote access terminals, the cost also represented relatively large expenditures (averaging $10,368 annually).

Table 78. Copying and Equipment Costs by Strata.

Equipment Category	Average Annual Cost for Equipment and Communications by Category					
	Academic Libraries		Public Libraries			State Libraries
	Large	Other	Large	Regional	Other	
Copying	$ 51,944 (9)	$ 1,254 (9)	$ 25,386 (6)	$ 1,486 (7)	$ 9,020 (2)	$ 7,337 (6)
Telex	0	$ 720 (1)	0	0	0	$ 12,005 (2)
Teletype, TWX	$ 2,209 (7)	$ 600 (1)	$ 9.251 (3)	$ 2,302 (3)	$ 1,188 (2)	$ 6,194 (3)
Datatel (Datel)	$ 1,086 (1)	0	0	0	0	0
Other Teletype Service	0	$ 798 (1)	0	0	0	$ 750 (1)
Facsimile(FAX)Transmission	0	$ 825 (1)	$ 739 (1)	0	0	$ 504 (1)
Dataphone	$ 1,200 (1)	0	0	0	0	$ 15,800 (1)
CRT or remote terminal	$ 10,368 (4)	0	0	0	0	$ 2,000 (1)
Line Charges	$ 500 (1)	0	0	0	$ 240 (1)	$ 60 (1)
Telephone, other than above	$ 10,656 (9)	$ 3,888 (7)	$ 17,339 (8)	$ 4,654 (9)	$ 2,924 (9)	$ 8,560 (8)
Other Communications Costs	$ 1,198 (2)	$ 226 (1)	$ 13,689 (1)	$ 10,658 (2)	$ 3,222 (6)	$ 2,904 (2)
TOTAL COMMUNICATIONS COSTS	$ 62,553 (10)	$ 3,473 (12)	$ 41,650 (8)	$ 8,945 (9)	$ 6,630 (10)	$ 18,002 (10)

Number in parenthesis indicates number of libraries reporting in this category.

D. Regional Services Provided by the Participants

Regional support provided by the participants was more widespread than initially expected. Thirty-seven libraries of the 86 libraries reporting indicated that they supplied regional services to a total of 4,667 libraries. A summary of the types of libraries supported appears in Table 79. The types of services provided are noted in Table 80. Remarkable among the findings is the number of libraries supported by Large Academic Libraries. Of special note are the number of school libraries (846) supported by two of the Large Academic Libraries. Significant, as well, is the fact that Regional Libraries provided support to fewer libraries than Large Publics, and averaged fewer supported libraries than did the three Other Publics indicating support.

Table 79. Regional Support Services Provided by Participants-Types of libraries supported

Regional Library Type	Average Number of Libraries Supported				
	Public	Academic	School	Special	Total
ACADEMIC					
Large	48(3)	9(4)	423(2)	68(2)	232(5)
Other	1(2)	1(1)	8(1)	1(1)	2(6)
PUBLIC					
Large	30(8)	8(5)	10(4)	42(5)	66(8)
Regional	14(9)	2(4)	36(2)	2(3)	24(9)
Other	12(3)	26(1)	42(1)	81(1)	61(3)
STATE	106(5)	17(4)	574(3)	49(5)	428(6)

Number in parenthesis indicates the number of libraries reporting in this category.
Corrected to reflect libraries reporting more than 99 libraries in any field.

Turning to the types of support provided by these, we find in Table 80 that the majority of support provided is in the area of interlibrary loan (particularly the provision of location information, bibliographic information, and acting as a switching center) and reference services.

Table 80. Regional Services Supplied by Participants

Regional Service Provided	Academic Libraries		Public Libraries			State
	Large (7)	Other(2)	Large (8)	Regional (9)	Other (3)	Libraries(8
ACQUISITIONS						
Maintenance of standing orders	0	0	2	3	0	1
Payment processing	0	0	2	3	0	3
Collection development	0	0	2	3	1	1
Claiming backordered materials	0	0	2	3	0	2
Returns	0	0	2	3	0	2
Cancellations	0	0	2	3	0	2
Ordering	0	0	0	0	0	1
Verification of orders	0	0	0	0	0	1
Training	0	0	0	0	0	1
Encumbrance reporting	0	0	1	0	0	1
Consulting	0	0	1	0	0	1
CATALOGING						
Production of card sets	1	0	0	2	0	5
Physical processing	0	0	2	3	0	5
Provision of cataloging copy	2	0	0	4	0	4
Production of book/microform catalog	1	0	2	0	0	2
Training and consulting	0	0	0	0	0	2
Shipping and location control	0	0	1	0	0	0
INTERLIBRARY LOAN						
Provide location information	3	1	7	7	0	6
Bibliographic verification	4	2	5	7	0	7
Act as switching center	4	1	6	8	0	8
Training	0	0	0	0	0	1
Subject requests	0	0	0	0	0	1
Back-up service for ILL	0	0	0	0	0	1
Referrals to larger network	1	0	0	0	0	1
Photocopy	1	0	1	0	0	1
Delivery systems	0	0	4	0	0	0
REFERENCE						
Data base searches	3	0	2	0	0	2
Referral services	1	0	7	3	2	5
Reference back-up	2	1	6	4	1	2
Training and consulting	0	0	1	0	0	0
OTHER						
Maintain union catalog/list	1	1	3	3	0	7
Training	0	0	0	1	0	0
Consulting	0	0	1	1	0	2
Secretarial support for region	0	0	0	0	1	0
Film Circuit	0	0	1	0	0	0

Number in parenthesis indicates the number of libraries reporting in this category.

Examining particularly union catalog maintenance observed in fifteen libraries reporting this type of regional support, we find that public libraries are most highly represented. As Table indicates, State Libraries are the single most prevalent union catalog custodian. It should also be noted that the remaining three state libraries not indicated in this table also maintain union catalogs, however no data were reported on these catalogs. A total of 305 libraries are represented by all these catalogs, of which 196 are public libraries. School libraries were the least represented, followed by special libraries of which only 30 libraries were represented. Interesting as well, is the fact that public libraries, both Large and Regional maintain union catalogs of only public library locations. The reader should note the California State Library Union Catalog (CSLUC) is not represented in these compilations.

Table 81. Union Catalogs Maintained by Participating Libraries--Characteristics of Contributors

Type of Library	Number of Libraries Contributing to the Union Catalog				
	Public Libraries	Academic Libraries	Special Libraries	School Libraries	TOTAL
ACADEMIC LIBRARIES					
Large (1)	0	17	0	0	17
Other (1)	2	1	2	10	15
PUBLIC LIBRARIES					
Large #1	15	0	0	0	15
Large #2	43	0	0	0	43
Large #3	11	0	0	0	11
Regional #1	4	0	0	0	4
Regional #2	13	0	0	0	13
Regional #3	25	0	0	0	25
STATE LIBRARIES					
State Library #1	4	6	5	1	16
State Library #2	13	5	12	12	42
State Library #3	0	0	4	0	4
State Library #4	8	1	1	0	10
State Library #5	10	13	1	0	24
State Library #6	3	13	2	0	18
State Library #7	45	0	3	0	48
TOTALS	196	56	30	23	305

As demonstrated in Table 82, the Regional Library Union Catalogs are fairly recent developments. Of the three Regionals reporting union catalogs, these catalogs have only been in existence for one or two years. The Large Public Libraries reporting ages of the catalogs, ranged from 5 years to 31 years in existence. Even the State Libraries did not report the existence of a union catalog dating back that far, the oldest being 11 years. The fact that over 2 million records are represented by these union catalogs points to the wealth of untapped location information within the western region. Coupled with the existence of the three bibliographic centers -- CSLUC, the Pacific Northwest Bibliographic Center, and the Bibliographical Center for Research--union catalogs hint at the potential for regional interlibrary loan and bibliographic support.

Table 82. Union Catalog Characteristics

Type of Custodian	Average Years In Existence	Union Catalogs: by Type of Holdings				Titles		Locations Held (Average)	Average Locations Per Title
		Monographs	Serials	Other	Combined	Held	Added Annually		
ACADEMIC LIBRARIES									
Large	6.0 (1)	1	1	0	1	21,362 (1	4,272 (1	*	7.00 (1)
Other	7.0 (1)	0	1	0	1	943 (1	93 (1	*	15.00 (1)
PUBLIC LIBRARIES									
Large	18.0 (2)	2	2	1	3	164,323 (3	13,184 (3	*	24.33 (3)
Regional	1.3 (3)	3	0	0	3	37,250 (2	50,000 (1	35,012 (2	13.00 (2)
STATE LIBRARIES	6.0 (7)	5	2	2	5	305,644 (5	27,951 (5	350,048 (7	18.34 (5)

Numbers in parentheses indicate number of libraries reporting.

Many of these libraries which provide regional support get some form of reimbursement. As Table 83indicates, support for the most part was provided by State Libraries. However, twenty percent of the support provided to Large Academics, Large Publics, and Other Regionals came from participating libraries. Four libraries supplying regional services also reported reimbursement on a per service basis. For cataloging support, one State Library receives $1.75 per volume processed, and one Large Academic receives 85¢ per card set issued. In addition, two Large Academics report an average reimbursement of 10 ¢per filled ILL request, and one Large Academic receives 50¢ per unfilled ILL request. Other Academic Libraries providing regional support indicate no form of reimbursement. The reader should recall the high labor costs of some of these processes discussed earlier; in many cases, reimbursement does not meet the full costs incurred by libraries supplying these services.

Table 83. Regional Library Support--Reimbursement

	Type of Library Providing Regional Services				
	Large Academic Library (7)	Public Libraries			State Libraries (2)
		Large (4)	Regional (6)	Other (2)	
TYPE OF REIMBURSEMENT					
Salaries	$ 19,650 (5)	$ 90,841 (2	$ 35,327 (3)	0	$ 120,762 (1)
Supply Supplement	$ 2,903 (3)	$ 21,399 (1	0	0	$ 3,645 (1)
Equipment Supplement	$ 50 (1)	0	0	0	$ 11,054 (1)
Annual Stipend	0	$ 16,800 (1	$ 86,154 (3)	0	$ 2,234 (2)
Other Annual Fees	$ 6,020 (4)	$316,000 (1	$ 40,135 (2)	$7,500 (2)	0
Per Volume Cataloged	0	0	0	0	1.75 (1)
Per Card Set Produced	$ .85 (1)	0	0	0	0
Per Volume Ordered	0	0	0	0	0
Per Filled ILL Request	$ .10 (2)	0	0	0	0
Per Unfilled ILL Request	$ .50 (1)	0	0	0	0
SOURCE OF REIMBURSEMENT					
State Libraries	49.0%	54.2%	66.7%	100%	87.0%
Participating Libraries	21.4%	21.0%	21.8%	0	13.0%
Other	36.6%	24.8%	11.5%	0	0

Numbers in parentheses indicate number of libraries reporting.

APPENDIX A

WILCO PUBLICATIONS LIST

January 1977

LIST OF WILCO PUBLICATIONS

Except as noted, the following in-print publications produced by the library program at WICHE may be ordered from: Publications Unit, WICHE, P.O. Drawer P, Boulder, Colorado 80302. Payment should accompany the order. Many of these publications, and others now out-of-print, may be available also through ERIC.

RESOURCE SHARING

Economic Issues in the Networking of Library Technical Support Services. Scott Gassler. October 1976. #2B131, $1.50.
A basic economic examination of the automated services market and the role of librarians, the Library of Congress, bibliographic centers, and brokers.

The Founding of the Western Interstate Library Coordinating Organization: A Narrative Final Report on the Project "Initiating the Design and Development of a Western Interstate Bibliographic Network." Karl M. Pearson, Jr. and Eleanor A. Montague. September, 1976. #2B136, $2.00.

Library Networking in the West: The Next Three Years. September, 1976. Order from WILCO, no charge. Assumptions concerning the networking environment 1977-1979, and goals and tasks for western librarians and networking services staffs.

A Review of Potential Components for the Western Bibliographic Network. Karl M. Pearson, Jr. and the Project Staff. March 1976. #2B121, $2.50.
Describes bibliographic utilities, service centers, networks, data bases, and telecommunications available for the support of western libraries. Includes surveys of union lists of serials and CLSI circulation control system installations.

WILCO Newsletter. 1-, January 1976, irregular. Order from WILCO, no charge.

COSTS STUDIES

The following publications were produced during the course of a project to analyze technical processing and interlibrary loan costs in a sample of 100 western libraries. The survey instruments and computer software used for the study are adaptable for use in individual libraries or library groups.

Costs Studies (cont.)

Cost and Funding Studies of the Proposed Western Interstate Bibliographic Network - Final Report. November 1976. #2B132, $3.00

Costs in Technical Processing and Interlibrary Loan - Data Processing Users Manual. Anita L. McHugh. November 1976. #2B133, $5.00.
The Cost Analysis Instruments are needed for following the explanations in this users manual.

Cost Analysis Instruments. (Set of 9 instruments). 1976. #2B122A, $5.00.

Librarian's Handbook for Costing Network Services. December 1976. #2B134, $2.00.
Using an input-process-output model, methods for evaluating alternative network services are suggested.

Survey of Costs in Technical Processing and Interlibrary Loan - Summary. Maryann K. Brown and Anita L. McHugh. December 1976. #2B130, $4.00.

Survey of Costs in Technical Processing and Interlibrary Loan - Survey Tables and Case Studies Results. Maryann K. Brown and Anita L. McHugh. December 1976. #2B129, $12.00.

CONTINUING EDUCATION

A Community Librarian's Training Program. Joseph F. Shubert. 1973. #2B79, $1.50.
A Report on a New Mexico program and guidelines for developing training programs based upon correspondence study and adult education techniques.

Hispano Library Service for Arizona, Colorado and New Mexico. Julia Vadala, ed. August 1970. Order from WILCO, no charge.

Interpersonal Communications Workshop. Sue Buel and Charles Hosford. July 1972. #2B101, no charge.
Materials selected from Interpersonal Communications, Northwest Regional Education Laboratory.

Staff Development and Continuing Education Programs for Library Personnel: Guidelines and Criteria. Barbara Conroy. January 1974. #2B94, $1.00.

Staff Development Model Book: Program Designs for Library Personnel. Barbara Conroy, ed. June 1976. #2B122, $2.50.
Compilation of staff development program designs contributed by participants in a WICHE/USOE year-long institute.

Training the Trainers to Train for Interlibrary Cooperation and Networking. Jo Chaunaud and Maryann Duggan. July 1975. #2B120, $4.00.

APPENDIX B
SAMPLE CHARACTERISTICS

INVITATIONS -- RESPONSE RATE BY STRATUM

STRATUM	NUMBER INVITED	PERCENT RESPONDING YES	PERCENT RESPONDING NO	PERCENT NOT RESPONDING	NUMBER OF LIBRARIES PRESENTLY PARTICIPATING
Large Academic	20	80.0%	20.0%	0%	16
Other Academic	48	54.2%	29.2%	16.6%	26
Large Public	14	78.6%	21.4%	0%	11
Other Regional	14	71.4%	21.4%	7.1%	10
Other Public	81	27.2%	30.9%	41.9%	22
State	17	88.2%	11.8%	0%	15
TOTAL	194	51.5%	26.3%	22.1%	100

INVITATIONS -- RESPONSE RATES BY STATE

STATE	NUMBER OF INVITATIONS ISSUED	PERCENT RESPONDING YES	NO	PERCENT NOT RESPONDING	NUMBER OF LIBRARIES PRESENTLY PARTICIPATING
Alaska	2	100%	0%	0%	2
Arizona	8	87.5%	0%	12.5%	7
California	50	54.0%	34.0%	12.0%	27
Colorado	14	57.1%	28.6%	14.5%	8
Hawaii	3	66.7%	0%	33.3%	2
Idaho	7	71.4%	0%	28.6%	5
Kansas	18	11.1%	55.6%	33.3%	2
Montana	11	54.5%	27.3%	18.2%	6
Nebraska	16	25.0%	12.5%	62.5%	4
Nevada	4	50.0%	25.0%	25.0%	2
New Mexico	4	75.0%	0.%	25.0%	3
North Dakota	6	50.0%	33.3%	16.7%	3
Oregon	15	46.7%	33.3%	20.0%	7
South Dakota	9	55.6%	33.3%	11.1%	5
Utah	6	83.3%	16.7%	0%	5
Washington	11	72.7%	18.2%	9.1%	8
Wyoming	5	40.0%	20.0%	40.0%	2
British Columbia	5	40.0%	0%	60.0%	2
TOTAL	194	49. %	26.3%	24.7%	100

NUMBER OF LIBRARIES PARTICIPATING IN SURVEY BY STATE

State	NUMBER OF LIBRARIES IN SAMPLE						
	Large Academic	Other Academic	Large Public	Other Regional	Other Public	State	TOTAL
Alaska	0	0	0	0	0	1	1
Arizona	2	0	1	1	1	0	5
California	2	5	7	0	5	0	19
Colorado	2	1	1	1	0	1	6
Hawaii	1	0	0	0	0	0	1
Idaho	0	0	0	1	3	1	5
Kansas	0	1	0	0	1	0	1
Montana	0	1	0	2	2	1	6
Nebraska	1	0	0	1	0	0	2
Nevada	0	0	0	1	0	1	2
New Mexico	0	2	0	0	0	1	3
North Dakota	0	2	0	0	0	1	3
Oregon	0	2	0	0	1	1	4
South Dakota	0	0	0	0	3	1	4
Utah	0	0	0	0	1	0	1
Washington	1	0	2	3	0	1	7
Wyoming	0	2	0	0	0	0	2
Br.Columbia	1	1	0	0	0	0	2
TOTAL	10	17	11	10	17	9	74

LIBRARIES INCLUDED IN SURVEY RESULTS

LIBRARIES INCLUDED IN SURVEY RESULTS

Academic

Large

University of Arizona
Arizona State University
University of California, Davis**
University of California, San Diego
University of California, Santa Barbara
University of Colorado
Colorado State University
University of Hawaii*
University of Nebraska
University of Oregon***
Brigham Young University, Utah**
University of Washington
University of British Columbia

Other

Navajo Community College, Arizona*
American River College, California
California State College, Dominguez Hill, California
California State University, Sacramento, California*
Palomar College, California
San Francisco State University, California
El Paso Community College, Colorado*
Butler County Community Junior College, Kansas*
Montana State University
New Mexico State University, San Juan
Western New Mexico University
Bismark Junior College, North Dakota
Valley City State College, North Dakota
Clatsop Community College, Oregon
Linn-Benton Community College, Oregon
Laramie County Community College, Wyoming
Western Wyoming Community College
College of New Caledonia, British Columbia*

Public

Large

Phoenix Public Library, Arizona
Contra Costa County Library, California*
Los Angeles Public Library, California*
Riverside Public Library, California
Sacramento City and County Library, California*
San Diego Public Library, California*
San Francisco City and County Library, California
Santa Clara County Library, California****
Denver Public Library, Colorado
King County Library, Washington
Seattle Public Library, Washington

Other Regional Libraries

Cochise County Public Library, Arizona
Weld County Library, Colorado
Coeur d'Alene Public Library, Idaho
Great Falls Public Library, Montana
Parmley Billings Public Library, Montana
Scotts Bluff Public Library, Nebraska
Washoe County Library, Nevada
Sno-Isle Regional Library, Washington
North Central Regional Library*
Fort Vancouver Regional Library, Washington

Other Public Libraries

St. John's Public Library, Arizona
Oakland Public Library, California****
Palm Springs Public Library, California*
Salinas Public Library, California*
Santa Clara Public Library, California
Roseville Public Library, California
Arco Public Library, Idaho*
Clearwater Memorial Library, Idaho
Shoshone-Bannock Library, Idaho*
Wichita County Public Library, Kansas
McCone Public Library, Montana*
Sheridan County Free Library, Montana
Forrest Grove Public Library, Oregon
Bennet County Library, South Dakota
Deadwood Public Library, South Dakota
Minnehaha County Rural Library, South Dakota
American Fork Public Library, Utah*

State Libraries

Arizona State Library
Colorado State Library
Idaho State Library
Montana State Library
Nevada State Library
New Mexico State Library
North Dakota State Library
Oregon State Library
South Dakota State Library
Washington State Library

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*Did not participate in interlibrary loan survey
**Study results not received before final analysis
***Participant in interlibrary loan survey only
****Interlibrary loan results not received before final analysis

APPENDIX D

ACTIVITY SHEETS AND TASK DEFINITIONS

FORM #4

ACQUISITIONS ACTIVITY SHEET

LIBRARY ______________ (8-10)
EMPLOYEE ID NUMBER ______________ (11-15)
DATE(S) ______________

ENTER BELOW THE TIME SPENT AND VOLUME PROCESSED IN EACH ACTIVITY LISTED. ACTIVITY SHEETS SHOULD BE COMPLETED BY EACH EMPLOYEE FOR EACH WEEK OVER A PERIOD OF THREE WEEKS. AN EMPLOYEE WHOSE WORK FALLS INTO TWO SECTORS UNDER STUDY (e.g. acquisitions and serials) WILL HAVE TWO SHEETS TO COMPLETE FOR THOSE DAYS IN WHICH HIS/HER ACTIVITIES OVERLAP. ENTRIES SHOULD BE MADE AS A TASK IS COMPLETED, FILLING OUT TOTAL BOXES ONLY AT THE END OF THE TIME PERIOD FOR WHICH THIS SHEET IS USED. ROUND OFF TIMES TO THE NEAREST FIVE MINUTES (e.g. 48 minutes should be entered as 50 minutes; 47 minutes as 45 minutes, etc.). DO NOT INCLUDE LUNCH BREAKS.

ACTIVITY (16-20)	TIME (in minutes) (21-25)	UNITS PROCESSED (26-30)
1. REVIEW BOOK ORDER REQUESTS: REVIEW SELECTION MEDIA: SELECT TITLES TO BE ORDERED: PREVIEW: MAKE WANT LISTS.	TOTAL:	(in titles selected) TOTAL:
2. APPROVAL PLAN PROCESSING	TOTAL:	(in titles approved) TOTAL:
3. TYPE/WRITE ORDER REQUEST CARD	TOTAL:	(in order requests) TOTAL:
4. PREORDER SEARCHING OF AUTOMATED OR OTHER SYSTEM RECORDS (SPECIFY SYSTEM ____________)	TOTAL:	(in searches) TOTAL:
5. OTHER PREORDER SEARCH, AND VERIFICATION OF BIBLIOGRAPHIC INFORMATION	TOTAL:	(in searches) TOTAL:
6. ASSIGN VENDOR AND FUND	TOTAL:	(in orders) TOTAL:
7. PREPARE MULTIPLE ORDER RECORD	TOTAL:	(in orders) TOTAL:
8. TYPE PURCHASE REQUISITION (IF NOT A PART OF ACTIVITY (7), ABOVE)	TOTAL:	(in orders) TOTAL:
9. REVISE, SIGN AND MAIL REQUISITION	TOTAL:	(in orders) TOTAL:
10. WORK WITH AUTOMATED SYSTEM FOR ACQUISITION PURPOSES (OTHER THAN ACTIVITY (4), ABOVE)	TOTAL:	(in orders) TOTAL:
11. BURST (SEPARATE) ORDER FORMS AND SORT	TOTAL:	(in order forms) TOTAL:
12. FILE FORMS	TOTAL:	(estimated number of forms) TOTAL:
13. ENCUMBRANCE OR PREPAYMENT ACCOUNTING ROUTINES	TOTAL:	(in orders) TOTAL:
14. UNPACK BOOKS; CHECK AGAINST PACKING LIST	TOTAL:	(in volumes) TOTAL:
15. RECEIPT AND BOOK ACCESSIONING ROUTINES	TOTAL:	(in volumes) TOTAL:
16. PREPARATION OF ACCESSION LISTS	TOTAL:	(in volumes accessioned) TOTAL:
17. NOTIFICATION OF REQUESTER	TOTAL:	(in notifications) TOTAL:

FOOTNOTES

FORM #4
PAGE 2

ACQUISITIONS ACTIVITY SHEET (cont.)

18. GIFT ROUTINES (PREPARE GIFT RECORD FORM, ETC.)	TOTAL:	(in gifts received) TOTAL:
19. EXCHANGE ROUTINES	TOTAL:	(in exchanges) TOTAL:
20. CHECK-IN, PREPARE INVOICES FOR PAYMENT	TOTAL:	(in invoices) TOTAL:
21. CLEAR IN-PROCESS FILE	TOTAL:	(in orders received) TOTAL:
22. PREPARATION OF RECEIVING REPORTS	TOTAL:	NO ENTRY
23. CLAIMS ROUTINES	TOTAL:	(in claims handled) TOTAL:
24. CANCELLATIONS ROUTINE	TOTAL:	(in cancellations) TOTAL:
25. RETURN ROUTINES	TOTAL:	(in returns) TOTAL:
26. OUT-OF-PRINT ROUTINES	TOTAL:	(in orders) TOTAL:
27. RENEWALS OR CONTINUATIONS PROCESSING	TOTAL:	(in continuations) TOTAL:
28. MAINTENANCE OF VENDOR FILES, VENDOR STATUS ROUTINES, ADDRESS FILES	TOTAL:	NO ENTRY
29. MAINTENANCE OF ORDER FILES, POSTING INFORMATION	TOTAL:	NO ENTRY
30. FUND MANAGEMENT, STATISTICAL REPORTING	TOTAL:	NO ENTRY
31. OTHER ADMINISTRATIVE, SUPERVISORY ROUTINES, TRAINING, PROFESSIONAL DEVELOPMENT, UNASSIGNED TIME (e.g. breaks) PEER CONSULTATION, TELEPHONE	TOTAL:	NO ENTRY
32. DATA COLLECTION FOR THIS STUDY	TOTAL:	NO ENTRY
33. OTHER (SPECIFY)	TOTAL:	TOTAL:
	TOTAL:	TOTAL:
	TOTAL:	TOTAL:

TOTAL TIME REPORTED ☐

(e.g. a normal 8 hour working day contains 480 minutes, a 40 hour work week contains 3400 minutes)

FOOTNOTES

ACQUISITIONS ACTIVITY SHEET (FORM #4) - DEFINITIONS OF ACTIVITIES

1. REVIEW BOOK ORDER REQUESTS; REVIEW SELECTION MEDIA; SELECT TITLES TO BE ORDERED; PREVIEW; MAKE WANT LISTS: Materials requested for purchase are reviewed for duplication of backordered materials or of materials in the collection; professional literature, bibliographies, etc. are reviewed for possible materials to be ordered by the library; titles are selected for ordering; publisher or vendor preview materials are reviewed for possible purchase; items for possible ordering are listed for future review and possible purchase.
2. APPROVAL PLAN PROCESSING: Materials received on approval plan are reviewed for possible purchase; if the item is to be purchased, the item is forwarded for payment processing and record entry; if the item is not desired by the library the item is prepared for return.
3. TYPE/WRITE ORDER REQUEST CARD: After a title has been reviewed and selected for purchase, an order request card is created for processing through the acquisitions department.
4. PREORDER SEARCHING OF AN AUTOMATED OR OTHER SYSTEM (e.g. MCRS, BATAB) RECORDS: Prior to ordering the item requested, bibliographic data is checked, publisher and price information is gathered from an automated system or other system records. This data may be incorporated into a form for future use in cataloging.
5. OTHER PREORDER SEARCH, AND VERIFICATION OF BIBLIOGRAPHIC INFORMATION: Prior to ordering an item which has been requested, bibliographic data is checked, publisher and pricing information gathered from sources such as BIP, Forthcoming books, NUC, LC proof slips, etc. This data may be incorporated into a form for future use in cataloging.
6. ASSIGN VENDOR AND FUND: A supplier of the material requested is identified and the appropriate fund or account to which the item will be charged is assigned.
7. PREPARE MULTIPLE ORDER RECORD: A record of the material to be purchased is created, usually in multiple copies to be used for control of the order within acquisitions and sometimes as a temporary record in the public catalog.
8. TYPE PURCHASE REQUISITION: If not included in the preparation of a multiple order record, a request to be sent to the vendor is prepared indicating materials to be purchased, sometimes list price and bibliographic data, along with publication numbers or vendor assigned control numbers of materials requested.
9. REVISE, SIGN AND MAIL REQUESTS: The order records and purchase requisitions are examined for accuracy, and corrected as necessary. Requisitions are then signed and mailed to the vendor.
10. WORK WITH AUTOMATED SYSTEM FOR ACQUISITION PURPOSES (OTHER THAN PREORDER SEARCHING): A computer system may be used to produce order records, purchase requisitions, vendor and fund assignment, book fund accounting, preparation of accession lists, producing notification of requester, preparation of record invoice for payment, etc. If such a system is used please specify system in the space provided.
11. BURST (SEPARATE) ORDER FORMS AND SORT: The multiple order record is separated into appropriate groups for filing or processing. These forms may be alphabetized according to the entry to be used in the file for which it is intended.
12. FILE FORMS: The separated order records are interfiled into appropriate catalogs or files. Filing may be checked by another employee for accuracy of filing, and revised or corrected as necessary.
13. ENCUMBRANCE OR PREPAYMENT ACCOUNTING ROUTINES: The fund assigned to the order is charged for the item to be purchased if prepayment is necessary, or the appropriate amount is encumbered from the fund. Payment is then processed and approved for payment to the vendor either prior or after receipt of the material requested depending upon the policies of the vendor and the library.
14. UNPACK BOOKS; CHECK AGAINST PACKING LIST: The materials requested are received and removed from shipping cover. The enclosed packing list is then checked against the receipts. Materials not received are forwarded to the appropriate personnel for claiming, and materials not ordered are forwarded to the appropriate personnel for returns.
15. RECEIPT AND BOOK ACCESSIONING ROUTINES: Materials that have been received are checked against order records for accuracy. Records are then pulled or annotated to note arrival of the requested item. Depending upon the policy of the library, the item may be assigned an accession number as a control of the item.
16. PREPARATION OF ACCESSION LISTS: Materials received are combined into a list of recent acquisitions,accession list or other document for either internal library use, or as a public document for the information of the patrons.
17. NOTIFICATION OF REQUESTER: The patron or staff member requesting the item is notified of the arrival of the item. A standard notification form may be prepared for mailing to the requester, or the requester may be notified by telephone

18. GIFT ROUTINES: Gifts received from individuals, other libraries, or foundations, are reviewed for possible inclusion in the library collection. Items are checked to insure against unnecessary duplication. Gift record forms are prepared, giving source of gift, date of gift, necessary bibliographic information, etc. Letters of gratitude may be issued to the donor.

19. EXCHANGE ROUTINES: Collections of other libraries, agencies or individuals are reviewed for possible trade of items within your library collection. This may be a part of a sharing agreement, in which individual libraries agree to develop collection in specified areas, and the exchange furthers this development for each library, or a one-time exchange to complete certain series within each library, etc.

20. CHECK-IN, PREPARE INVOICES FOR PAYMENT: The received item is checked against order records, and the record is annotated to note the receipt. Forms are prepared to process payment to the vendor for the item and forwarded to the appropriate accounting division.

21. CLEAR IN-PROCESS FILE: Records for items which have been ordered and received are removed from the in-process file and may be attached to the item or forwarded to another receiving file with notations of date received and action taken.

22. PREPARATION OF RECEIVING REPORTS: Items received and payments processed are entered into an acquisitions report for accounting or internal purposes.

23. CLAIMS ROUTINES: After a specified period from the time an item is ordered, the vendor is re-queried to supply the item. A claim is then filed in a claims file to control the progress of the item. Replies to the claim are reviewed, and appropriate action on the reply is taken.

24. CANCELLATIONS ROUTINES: An order which has already been issued is canceled either due to a duplicate receipt, unsatisfactory service from the vendor, or a decision not to purchase the item. A notice is prepared for the vendor, and records concerning the order are removed or annotated to reflect the cancellation of the order.

25. RETURN ROUTINES: Items received on a preview basis, approval plan, or in error are prepared for shipment back to the vendor. Records of this disposition may be prepared and filed or forwarded to the appropriate section.

26. OUT-OF-PRINT ROUTINES: The library may be notified that an item which has been ordered is out-of-print by the vendor. The title is then reviewed for possible alternative action. If the item will not be sought elsewhere the appropriate records are annotated as out-of-print ("o.p.") and removed to the designated files for out-of-print materials. The item may be sought elsewhere from such vendors who supply out-of-print materials if the title is desired.

27. RENEWALS OR PROCESSING: Serials, standing orders, or other long-term order are reviewed periodically for suitability to the library. If the order is still desired, the vendor is notified of continuation of the order, payments for the order may be made and records reinstated. This would include renewals also.

28. MAINTENANCE OF VENDOR FILES, VENDOR STATUS ROUTINES, ADDRESS FILES: Files are maintained on the vendors with which the library deals. These files are updated (new records are typed, revised and filed), and weeded (discontinued vendors are removed from the files). Changes of address are noted on the appropriate vendor record. Correspondence files containing interaction between the library and vendor may also be maintained.

29. MAINTENANCE OF ORDER FILES, POSTING INFORMATION: Order files are reviewed for backordered materials. Information concerning the status of the order may be entered on the order record. Order records are checked to verify non-receipt.

30. FUND MANAGEMENT, STATISTICAL REPORTING: The status of funds are maintained. Book fund accounting is performed. Reports may be developed to indicate status of funds, summarize a record of orders, develop statistical data on acquisitions.

31. OTHER ADMINISTRATIVE, SUPERVISORY ROUTINES, TRAINING, PROFESSIONAL DEVELOPMENT, UNASSIGNED TIME, PEER CONSULTATION, TELEPHONE: Any time spent in supervising personnel within the department, on administrative duties (such as correspondence, staff review, reports, budgeting), training new personnel, conferring with associates, professional reading, staff or professional meetings, telephone answering, coffee breaks, or other non-assigned time for which you are paid. DO NOT include lunch breaks, sick leave or vacation. Do not include time for which you are not paid.

32. DATA COLLECTION FOR THIS STUDY: Enter time spent in filling out this form or reviewing procedures or definitions for this study in this category.

33. OTHER: Enter here only those tasks which do not fall into any of the above categories. Please specify the activity, time spent in this task, and volume processed (if applicable).

CATALOGING ACTIVITY SHEET

C & F STUDY FORM #5

LIBRARY____________________________ (8-10)
EMPLOYEE ID NO.______________________ (11-15)
DATE(S)______________________________

ENTER BELOW THE TIME SPENT AND VOLUME PROCESSED IN EACH ACTIVITY LISTED. EXCLUDE TIME SPENT IN SERIALS CATALOGING. THIS TIME SHOULD BE ENTERED IN FORM #6. ACTIVITY SHEETS SHOULD BE COMPLETED BY EACH EMPLOYEE FOR EACH WEEK OVER A PERIOD OF THREE WEEKS. AN EMPLOYEE WHOSE WORK FALLS INTO TWO SECTORS (e.g. serials and cataloging) UNDER STUDY WILL HAVE TWO SHEETS FOR THOSE DAYS WHERE HIS/HER ACTIVITIES OVERLAP. ENTRIES SHOULD BE MADE AS A TASK IS COMPLETED, FILLING OUT TOTAL BOXES AT THE END OF THE WEEK FOR WHICH THIS SHEET IS USED. ROUND OFF TO THE NEAREST 5 MINUTES (e.g. 48 minutes should be entered as 50 minutes, 47 minutes as 45 minutes, etc.) DO NOT INCLUDE LUNCH BREAKS.

ACTIVITY (16-20)	TIME (in minutes) (21-25)	UNITS PROCESSED (26-30)
1. RECEIVE SORT, DISTRIBUTE INCOMING ITEMS	TOTAL:	(no entry)
2. SEARCHING FOR LC CARD OR COPY, OTHER CATALOGING COPY (e.g. MCRS, NUC)	TOTAL:	(in volumes) TOTAL:
3. OTHER BIBLIOGRAPHIC VERIFICATION	TOTAL:	(in volumes) TOTAL:
4. PHOTOGRAPHING CARD COPY FROM SOURCE SUCH AS NUC	TOTAL:	(in frames) TOTAL:
5. ORDERING, RECEIVING, ARRANGING CATALOG CARDS OR PROOF SLIPS.	TOTAL:	(no entry)
6. MATCHING CARD OR CARD COPY WITH ITEM	TOTAL:	(in volumes) TOTAL:
7. ADDED COPY/ADDED VOLUME ROUTINES	TOTAL:	(in volumes) TOTAL:
8. ORIGINAL CATALOGING	TOTAL:	(in volumes) TOTAL:
9. CATALOGING WITH CARDS OR CARD COPY (INCLUDING POLOROID COPY)	TOTAL:	(in volumes) TOTAL:
10. "FAST-CAT", RUSH CATALOGING, ABBREVIATED CATALOGING	TOTAL:	(in volumes) TOTAL:
11. CATALOGING FROM AUTOMATED (e.g. OCLC) OR OTHER (e.g. MCRS) SYSTEM RECORDS (specify system): ______________________________	TOTAL:	(in volumes) TOTAL:
12. CATALOGING REVISION (e.g. reclassification, checking headings, etc.)	TOTAL:	(in volumes) TOTAL:
13. MANUAL PRODUCTION/REPRODUCTION/PRINTING OF CATALOG CARDS (including preparation, typing of card and headings)	TOTAL:	(in cards produced) TOTAL:
14. REVISION OF CATALOG CARDS (e.g. proofing for accuracy, correcting)	TOTAL:	(in cards) TOTAL:
15. ALPHABETIZING, PREFILING OF CATALOG CARDS	TOTAL:	(estimate of cards) TOTAL:
16. FILING CATALOG CARDS INTO CATALOGS (including shelf list) AND FILING REVISION	TOTAL:	(estimate of cards) TOTAL:
17. AUTHORITY WORK, UPDATING AUTHORITY FILES	TOTAL:	(no entry)
18. PREPARE AND REVISE CIRCULATION CARD, BOOK POCKET	TOTAL:	(in volumes) TOTAL:
19. PREPARE BOOK FOR SHELF (e.g. paste spine label, book pocket, stamp, etc.)	TOTAL:	(in volumes) TOTAL:
20. CATALOG MAINTENANCE (replacing cards, transferring files, etc.	TOTAL:	TOTAL:
21. "SPECIAL PROJECTS"	TOTAL:	TOTAL:
22. SUPERVISION, ADMINISTRATION, TRAINING, UNASSIGNED TIME, (e.g. breaks), MEETINGS, PROFESSIONAL DEVELOPMENT, PEER CONSULTATION, TELEPHONE	TOTAL:	TOTAL:
23. DATA COLLECTION FOR THIS STUDY	TOTAL:	TOTAL:
24. OTHER (SPECIFY)	TOTAL:	TOTAL:
	TOTAL:	TOTAL:
	TOTAL:	TOTAL:

TOTAL TIME REPORTED ☐

(e.g. a normal 8 hour working day contains 480 minutes, a 40 hour work week contains 3400 minutes)

FOOTNOTES____________________________

CATALOGING ACTIVITIES

1. RECEIVE, SORT, DISTRIBUTE INCOMING ITEMS: Items/mail are received from acquisitions or mail room. These items are then sorted and distributed to the appropriate person or sections.
2. SEARCHING FOR LC CARD OR COPY, OR OTHER CATALOGING COPY (e.g. MCRS, NUC): Locating cataloging copy or copy closely approximating titles to be cataloged. This includes searching proof slip files, NUC, or the LC catalog of printed cards for cataloging input and card reproduction. May also include searching cataloging data from microform card catalog sources.
3. OTHER BIBLIOGRAPHIC VERIFICATION: Searching and verifying of bibliographic information other than that included in (2) above.
4. PHOTOGRAPHING CARD COPY FROM NUC OR OTHER CARD SOURCE: Copying, by means of a camera, cataloging source copy for use in cataloging and/or reproduction of catalog cards.
5. ORDERING, RECEIVING, ARRANGING CATALOG CARDS OR PROOF SLIPS: The ordering, alphabetizing, and receiving of catalog cards or copy from the Library of Congress or from a vendor, card supplier, or other agent.
6. MATCHING CARD OR CARD COPY WITH ITEM: Prior to cataloging an item, cataloging copy or cards are matched to the item which it represents. Author and title are checked against the cards. Cards or card copy are then attached to item.
7. ADDED COPY/ADDED VOLUME ROUTINES: Additional copies or further volumes of a title which has previously been cataloged by your library. Depending upon library policy, the main entry and shelf list card (occasionally the Kardex record) may be annotated to indicate the item has arrived. Some additional processing may also be necessary.
8. ORIGINAL CATALOGING: Descriptive cataloging, subject analysis, classification, analytics and authority work (i.e. name and subject, etc.) are performed where no LC copy or adequate cataloging data are available. A cataloger prepares a work form, or work sheet to be used in typing copy for catalog card reproduction or for input into an automated system, book or microform catalog.
9. CATALOGING WITH CARDS OR CARD COPY (INCLUDING POLOROID COPY): The classification and description of an item using LC cards, LC-NUC copy, commercial cards, CIP data from the title page verso, commercial cards, or card copy.
10. "FAST-CAT", RUSH CATALOGING, ABBREVIATED CATALOGING: The classification and description of an item in an abbreviated form so that the item can be used or circulated immediately.
11. CATALOGING FROM AUTOMATED (e.g. OCLC) OR OTHER CATALOGING SYSTEM RECORDS: The use of an automated cataloging system (e.g. OCLC, BALLOTS) or other system (such as MCRS) to locate cataloging records. The classification and description of the item may then be taken from these records. Please specify the system employed.
12. CATALOGING REVISION: The review of cataloging and classification by someone other than the cataloger him/herself to insure correctness and appropriateness. Corrections and changes are made as necessary.
13. MANUAL PRODUCTION/REPRODUCTION/PRINTING OF CATALOG CARDS: Catalog, shelf list and authority cards are produced or reproduced for use in the various card catalogs. A master card is sometimes typed, to be used in reproducing sets of unit cards or a complete set of cards is typed. A close copy may then be modified for the same purposes. The modified card then serves as a master card. Also included in this category are the typing of card headings, printing of cards, copying of card sets.
14. REVISION OF CATALOG CARDS: Produced card sets are proofed for accuracy of headings, typographical errors, or a master card is proofread for accuracy. Corrections are made as necessary.
15. ALPHABETIZING, PREFILING OF CATALOG CARDS: Card sets are sorted and alphabetized for new titles, main entry and analytic cards for added volumes, cards for titles recataloged or reclassified, cards withdrawn to update entry, etc. These cards are arranged into 26 groups according to the first letter of the first word of catalog entry with additional sortings of each subgroup by 2nd and 3rd letter, and the final arrangement of each subgroup in alphabetic order, word by word, to the end of the entry of each card.
16. FILING CATALOG CARDS INTO CATALOGS AND FILING REVISION: Cards which have been prefiled into alphabetical groups and according to receiving catalogs are then placed in the appropriate filing order for the catalog. Interfiled cards may be placed above the drawer bar to be checked by another employee for accuracy. Filing is then corrected or revised and placed under the bar.
17. AUTHORITY WORK, UPDATING AUTHORITY FILES: Maintenance and updating of uniform main entries, subject headings, cross-references in order to control and keep current standard headings employed in the catalog.
18. PREPARE AND REVISE CIRCULATION CARD, BOOK POCKET: A book pocket and card to be placed in the item may be prepared giving main entry, title, call number, accession number, etc. This pocket and card is then reviewed for accuracy and attached to the item for eventual permanent placement in the item.
19. PREPARE BOOK FOR SHELF: The item is stamped with the library ownership stamp and accession number. A gift form may be attached to the item. The item may be rebound for the shelf, and spine label and plastic cover may be attached.
20. CATALOG MAINTENANCE: The card catalogs or other catalogs are reviewed periodically for damaged cards, withdrawn or missing items, etc. Cards are then removed for replacement or annotation, or plastic covers placed over the card.
21. "SPECIAL PROJECTS": Duties associated with a special project within the cataloging department, such as reclassification or conversion projects, are included in this category. Usually a special project is conducted for a specified period of time and may require additional staff on a temporary basis.
22. SUPERVISION, ADMINISTRATION, TRAINING, UNASSIGNED TIME, MEETINGS, PROFESSIONAL DEVELOPMENT, PEER CONSULTATION, TELEPHONE: Any time spent in supervising personnel within the department, on administrative duties (such as correspondence, staff review, reports, budgeting, statistics), training new personnel for duties, conferring with associates, professional reading, staff or professional meetings, telephone answering, coffee breaks, or other non-assigned time should be entered here. DO NOT INCLUDE LUNCH BREAKS, OR SICK OR VACATION LEAVE. Do not include time for which you are not paid.
23. DATA COLLECTION FOR THIS STUDY: Enter time spent in filling out this form or reviewing procedures or definition for this study in this category.
24. OTHER: Enter here only those tasks which do not fall into any of the above categories. Please specify the activity, time spent in this task, and volume processed (if applicable).

SERIALS/PERIODICALS CHECK-IN AND CATALOGING ACTIVITY SHEET

C & F STUDY FORM #6

LIBRARY________________________ (8-10)
EMPLOYEE ID NUMBER__________________(11-15)
DATE(S) ________________________

ENTER BELOW THE TIME SPENT AND VOLUME PROCESSED IN EACH ACTIVITY LISTED. ACTIVITY SHEETS SHOULD BE COMPLETED BY EACH EMPLOYEE FOR A PERIOD OF THREE WEEKS. AN EMPLOYEE WHOSE WORK FALLS INTO TWO SECTORS UNDER STUDY (e.g. serials and acquisitions) WILL HAVE TWO SHEETS TO COMPLETE FOR THOSE DAYS ON WHICH HIS/HER ACTIVITIES OVERLAP. ENTRIES SHOULD BE MADE AS EACH TASK IS COMPLETED, FILLING TOTAL BOXES AT THE END OF THE PERIOD FOR WHICH THIS SHEET IS USED. DO NOT INCLUDE LUNCH BREAKS. ROUND OFF TO THE NEAREST 5 MINUTES (e.g. 48 minutes should be entered as 50 minutes, 47 minutes as 45 minutes. etc.)

ACTIVITY (16-20)	TIME (in minutes) (21-25)	UNITS PROCESSED (26-30)
1. RECEIVE, SORT, DISTRIBUTE INCOMING ITEMS	TOTAL:	(no entry)
2. BIBLIOGRAPHIC SEARCHING	TOTAL:	(in titles) TOTAL:
3. OTHER BIBLIOGRAPHIC VERIFICATION	TOTAL:	(in titles) TOTAL:
4. SERIALS/PERIODICALS CONTROL (CHECK-IN) ON AUTOMATED SYSTEM (SPECIFY SYSTEM ________________)	TOTAL:	(in items) TOTAL:
5. ORIGINAL CATALOGING OF SERIAL TITLES	TOTAL:	(in titles) TOTAL:
6. SERIALS CATALOGING WITH CARDS OR CARD COPY	TOTAL:	(in titles) TOTAL:
7. CATALOGING SERIALS FROM AUTOMATED OR OTHER SYSTEM RECORDS (SPECIFY SYSTEM ________________)	TOTAL:	(in titles) TOTAL:
8. CHANGE IN AUTHOR/TITLE ROUTINES	TOTAL:	(in titles) TOTAL:
9. CLAIMS ROUTINES	TOTAL:	(in items claimed) TOTAL:
10. BINDERY ROUTINES	TOTAL:	(in volumes) TOTAL:
11. CANCELLATION ROUTINES	TOTAL:	(in subscriptions cancelled) TOTAL:
12. RENEWAL AND ORDERING ROUTINES	TOTAL:	(in subscriptions) TOTAL:
13. TYPING/REVISING KARDEX RECORDS	TOTAL:	(in cards) TOTAL:
14. MANUAL PRODUCTION/REPRODUCTION/PRINTING OF CATALOG CARDS (including preparation, typing of card and headings)	TOTAL:	(estimated number of cards) TOTAL:
15. AUTHORITY WORK	TOTAL:	(no entry) TOTAL:
16. INVOICE PROCESSING	TOTAL:	(in invoices) TOTAL:
17. ADMINISTRATION, SUPERVISION, UNASSIGNED (e.g. breaks) TRAINING, PROFESSIONAL DEVELOPMENT, PEER CONSULTATION, TELEPHONE	TOTAL:	(no entry)
18. DATA COLLECTION FOR THIS STUDY	TOTAL:	(no entry)
19. OTHER (SPECIFY)	TOTAL:	TOTAL:
	TOTAL:	TOTAL:
	TOTAL:	TOTAL:

TOTAL TIME REPORTED ☐

(e.g. a normal 8 hour working day contains 480 minutes, a 40 hour work week contains 3400 minutes)

FOOTNOTES ______________________________

C & F STUDY FORM #6

SERIALS/PERIODICALS CHECK-IN AND CATALOGING ACTIVITIES

1. RECEIVE, SORT, DISTRIBUTE INCOMING ITEMS: Items, mails are received from acquisitions or mail room. These items are then sorted and distributed to the appropriate persons or sections.
2. BIBLIOGRAPHIC SEARCHING: New serial titles are searched in publisher lists, bibliographic sources, etc. for cataloging information to be used in cataloging the title. Bibliographic data may be photographed or reproduced as copy for cataloging the title.
3. OTHER BIBLIOGRAPHIC VERIFICATION: Other bibliographic checking is often necessary for a title which has changed title, publisher or issuance policy several times. Additional verification may also be required for analytics, and authority work.
4. SERIALS/PERIODICALS CONTROL (CHECK-IN) ON AUTOMATED SYSTEM: Successive issues of a serial title which is already cataloged in your library are checked in kardex file, system records, or other control of serials. The item is checked against the record to insure that the title is the same that appears on the record, that back issues have all been received, etc. A notation, such as a check mark, or date of issue, is made on the record to verify its receipt. Additional posting may also be performed.
5. ORIGINAL CATALOGING OF SERIAL TITLES: A new serial title which has been received by the library. Descriptive cataloging, subject analysis, classification and analytics are performed where no LC copy or adequate cataloging data are available. A cataloger prepares a work form, or sheet, to be used in typing copy for catalog reproduction, input into a automated system, or creation of a kardex record. Preparation of work sheets for entries into lists of serials may also be done.
6. SERIALS CATALOGING WITH CARDS OR CARD COPY: A new serial title or additional copy of a serial title already held by the library, is received. The cataloger classifies and describe the title using LC cards, Union List cataloging data, commercial cards, or card copy.
7. CATALOGING SERIALS FROM AUTOMATED OR OTHER SYSTEM RECORDS: A new serial title is searched against the automated system. If the title is located, data is manipulated according to the policies of the library to create a record or cards for the title. Please specify system.
8. CHANGE IN AUTHOR/TITLE ROUTINES: A serial which is already held by the library changes publisher, title, or sponsoring agency. Cards for the serial (catalog and kardex) are pulled for annotation (if a minor change) or for new cards. Appropriate cross-references, card and kardex revision, cataloging revision (if required) are made.
9. CLAIMS ROUTINES: An issue of a serial title has not been received in a specified time since publication. The vendor is notified to supply the item, records are annotated to indicate the issuance of a claim, and a claim record may be filed in a claims file. When the item or other notification of the disposition of the request is received, the claim is pulled and attached to the item or records are annotated to indicate other disposition such as out-of-print, not issued, etc.
10. BINDERY ROUTINES: When a volume is complete, a bindery slip is filled out and attached to the item. Other issues of the volume may be collected from the stacks, and the entire volume, if complete, forwarded to bindery. Records are annotated to indicate the volume as in bindery.
11. CANCELLATION ROUTINES: Continuation of a serial title subscription is no longer desired by the library. The vendor is notified to cancel the subscription. Records are annotated to note discontinuance ("closed-out"), and kardex record may be removed to a "dead file".
12. RENEWAL AND ORDERING ROUTINES: A serial title is reviewed for inclusion in the library collection. If desired, the title is ordered from the appropriate vendor and payment processed. A serial title, already owned by the library, is renewed after the prior subscription terminates.
13. TYPING/REVISING KARDEX RECORDS: New serial titles, additional titles, changes in title often require new Kardex records. The kardex card is typed, reviewed, and corrected if necessary.
14. MANUAL PRODUCTION/REPRODUCTION/PRINTING OF CATALOG CARDS: Catalog cards, shelf list, and authority cards are produced or reproduced for use in the various card catalogs. A master card is sometimes typed, reviewed, and corrected as necessary. The master copy may then be used for reproduction purposes. Headings may be typed on card sets. Printing and copying of cards is also included in this category.
15. AUTHORITY WORK: Maintenance and updating of uniform main entries, subject headings, cross-reference in order to control and keep current standard headings employed in the catalog.
16. INVOICE PROCESSING: A serial which has been ordered or renewed must have payment processed. An invoice may be received from the vendor for payment. This invoice is then recorded in an appropriate record and forwarded to accounting for payment.
17. ADMINISTRATION, SUPERVISION, UNASSIGNED TIME, TRAINING, PROFESSIONAL DEVELOPMENT, PEER CONSULTATION, TELEPHONE: Any time spent in supervising personnel within the department, on administrative duties (e.g. correspondence, staff review, reports, budgeting, statistics), training new personnel, conferring with associates, professional reading, staff or professional meetings, telephone answering, coffee breaks, or other unassigned time for which you are paid. Do not include lunch breaks, or sick leave, or vacation. Do not include time for which you are not paid.
18. DATA COLLECTION FOR THIS STUDY: Enter time spent in filling out this form, or reviewing procedures or definitions for this study under this category.
19. OTHER: Enter here only those tasks which do not fall into any of the above categories. Please specify the activity, time spent in this task, and volume processed (if applicable).

C & F STUDIES FORM # 7

INTERLIBRARY LOAN ACTIVITY SHEET

LIBRARY________________ (8-10)

EMPLOYEE ID NUMBER__________ (11-15)

DATE(S)______________________

ENTER BELOW THE TIME SPENT AND VOLUME PROCESSED IN EACH ACTIVITY LISTED. ACTIVITY SHEETS SHOULD BE COMPLETED BY EACH EMPLOYEE FOR EACH WEEK OVER A PERIOD OF THREE WEEKS. AN EMPLOYEE WHOSE WORK FALLS INTO TWO SECTORS UNDER STUDY (e.g. interlibrary loan and serials) WILL HAVE TWO SHEETS TO COMPLETE FOR THOSE DAYS IN WHICH HIS/HER ACTIVITIES OVERLAP. ENTRIES SHOULD BE MADE AS A TASK IS COMPLETED, FILLING OUT TOTAL BOXES ONLY AT THE END OF THE WEEK FOR WHICH THIS SHEET IS USED. ROUND OFF TO NEAREST FIVE MINUTES (e.g. 48 minutes should be entered as 50 minutes, 47 minutes as 45 minutes). DO NOT INCLUDE LUNCH BREAKS.

	LENDING ACTIVITIES (16-20)	TIME (in minutes) (21-25)	UNITS PROCESSED (26-30)
REQUEST	. RECEIVING REQUEST	TOTAL:	TOTAL:
	2. VERIFYING REQUEST	TOTAL:	TOTAL:
	3. CHECKING SERIALS/PERIODICALS CATALOG	TOTAL:	TOTAL:
	4. CHECKING CATALOG, LOCATING ITEM REQUESTED	TOTAL:	TOTAL:
	5. REPLY (if your library does not own or cannot circulate requested item)	TOTAL:	TOTAL:
	6. SEARCHING SHELVES, PICK-UP ITEM REQUESTED	TOTAL:	TOTAL:
PHOTOCOPYING	7. CHECKING PAGES REQUESTED FOR COPYING	TOTAL:	TOTAL:
	8. SENDING TO PHOTOCOPY	TOTAL:	TOTAL:
	9. COPYING PAGES REQUESTED	TOTAL:	TOTAL:
	10. INVOICING AND PROCESSING PAYMENT FOR PHOTOCOPY	TOTAL:	TOTAL:
CIRCULATION	11. CHECK-OUT/CIRCULATE ITEM	TOTAL:	TOTAL:
	12. WRAPPING, DISTRIBUTING, PREPARING FOR MAIL	TOTAL:	TOTAL:
	13. OVERDUE ROUTINES	TOTAL:	TOTAL:
	14. RENEWAL ROUTINES	TOTAL:	TOTAL:
	15. UNWRAPPING, INSPECTING RETURNED ITEMS	TOTAL:	TOTAL:
	16. CHANGING CIRCULATION RECORDS/DISCHARGING ITEM	TOTAL:	TOTAL:
	17. RESHELVING RETURNED ITEMS	TOTAL:	TOTAL:
	18. INVOICING AND PROCESSING PAYMENT FOR ILL SERVICES	TOTAL:	TOTAL:
OTHER	19. OTHER LENDING ACTIVITIES (SPECIFY)	TOTAL:	TOTAL:
		TOTAL:	TOTAL:
		TOTAL:	TOTAL:

FOOTNOTES______________

INTERLIBRARY LOAN ACTIVITY SHEET

Page 2

	BORROWING ACTIVITIES	TIME (in minutes)	UNITS PROCESSED
REQUEST	20. ASSISTANCE TO PATRON	TOTAL:	TOTAL:
	21. VERIFYING BIBLIOGRAPHIC INFORMATION	TOTAL:	TOTAL:
	22. DETERMINING LOCATION (IF NOT A PART OF ACTIVITY 21)	TOTAL:	TOTAL:
	23. COMPLETING FORM, MAILING, TRANSMITTING REQUEST	TOTAL:	TOTAL:
RECEIPT	24. RECEIVING AND UNWRAPPING ITEM REQUESTED	TOTAL:	TOTAL:
	25. CHECKING REQUEST RECORDS	TOTAL:	TOTAL:
	26. NOTIFICATION OF PATRON WHO REQUESTED ITEM	TOTAL:	TOTAL:
CIRCULATION	27. INVOICING PATRON FOR ILL SERVICES	TOTAL:	TOTAL:
	28. PROCESSING PAYMENT FOR ILL SERVICES	TOTAL:	TOTAL:
	29. PROCESSING OVERDUES	TOTAL:	TOTAL:
	30. PROCESSING RENEWALS	TOTAL:	TOTAL:
	31. CHANGING CIRCULATION RECORDS. DISCHARGING RETURNED ITEMS	TOTAL:	TOTAL:
	32. RETURNING ITEM (WRAPPING, PREPARING FOR MAIL)	TOTAL:	TOTAL:
OTHER BORROWING	33. OTHER BORROWING ACTIVITIES (SPECIFY)	TOTAL:	TOTAL:
		TOTAL:	TOTAL:
		TOTAL:	TOTAL:

	OTHER ACTIVITIES	TIME (in minutes)	UNITS PROCESSED
OTHER	34. ADMINISTRATION, SUPERVISION, PROFESSIONAL DEVELOPMENT, MEETINGS, TRAINING, UNASSIGNED TIME (e.g. breaks), PEER CONSULTATION, TELEPHONE	TOTAL:	
	35. DATA COLLECTION FOR THIS STUDY	TOTAL:	
	36. OTHER (SPECIFY)	TOTAL:	TOTAL:
		TOTAL:	TOTAL:
		TOTAL	TOTAL:

TOTAL TIME REPORTED ☐

FOOTNOTES

(e.g. a normal 8 hour working day contains 480 minutes, a 40 hour work week contains 3400 minutes)

INTERLIBRARY LOAN ACTIVITY SHEET (FORM #7) - DEFINITIONS OF ACTIVITIES

LENDING ACTIVITIES

1. RECEIVING REQUEST: A request is received from another library for materials held by your library. The request may be received by telephone, mail, teletype or other means of communication.
2. VERIFYING REQUEST: Bibliographic data may be verified to insure correctness of entry given in request.
3. CHECKING SERIALS/PERIODICALS CATALOG: Requests for articles in periodicals or serials must be checked against library holdings. Records of periodical/serial titles (e.g. kardex record, serials lists) are checked to ascertain the availability of the item requested.
4. CHECKING CATALOG, LOCATING ITEM REQUESTED: The library catalog is searched to locate the call number or location of the title requested. Serials or kardex records may be checked to insure that the library has the issue requested.
5. REPLY (if your library does not own or cannot circulate requested item): After the appropriate records have been checked, the item is determined to be unavailable through your library. Forms are then annotated and a response is prepared for the requesting library. Reply may be teletyped, telephoned, mailed to the requesting library.
6. SEARCHING SHELVES, PICK-UP ITEM REQUESTED: The library shelves are searched to locate the item requested. The item, if on the shelves, is retrieved for lending purposes.
7. CHECKING PAGES REQUESTED FOR COPYING: Pages are checked to insure correctness of request, and corrected where necessary. Pages are then marked for photocopy.
8. SENDING TO PHOTOCOPY: The item is then delivered to photocopy so that the pages requested can be copied.
9. COPYING PAGES REQUESTED: The pages that are needed are copied, or microcopied.
10. INVOICING AND PROCESSING PAYMENT FOR PHOTOCOPY: The borrowing institution is billed for photocopy according to the rates established by your library. An invoice is prepared, reviewed, and corrected as necessary. The invoice is then issued to the borrowing institution, and necessary records maintained. Payment is then processed upon receipt according to the policies of your library.
11. CHECK-OUT/CIRCULATE ITEM: A card or record is created to indicate borrower, title, due date, etc., and filed with other circulation records. A card is included with item to reflect due date.
12. WRAPPING, DISTRIBUTING, PREPARING FOR MAIL: The item or photocopy is properly wrapped for shipment, addressed, etc. The item or photocopy may be hand delivered or prepared for messenger service as well.
13. OVERDUE ROUTINES: The item which has been lent to the requesting institution is overdue or requested by another patron. The item is then requested from the borrowing institution for return. Records are annotated to indicate that the item has been requested. If the item is not returned the requesting institution is billed for the amount of purchase of the item.
14. RENEWAL ROUTINES: The borrowing institution requests an extension of the loan period. If the extension is granted, circulation records are annotated to reflect the revised due date.
15. UNWRAPPING, INSPECTING RETURNED ITEMS: Returned items are received, unwrapped, inspected to insure against damage, and that the appropriate item is enclosed.
16. CHANGING CIRCULATION RECORDS/DISCHARGING ITEM: Circulation records are annotated to reflect the return of the item, and record is removed from active files.
17. RESHELVING RETURNED ITEMS: The returned item, after discharge, is returned to its appropriate place on the shelf according to classification or other shelving scheme.
18. INVOICING AND PROCESSING PAYMENT FOR ILL SERVICES: If your library charges for lending materials from its collection, the borrowing institution is invoiced, and upon receipt of payment, the payment is processed through the appropriate channels according to library policy.
19. OTHER LENDING ACTIVITIES: Enter here other activities associated with lending materials to other institutions and which do not belong in any of the above activities. Indicate time spent on this task and units processed (if applicable.)

BORROWING ACTIVITIES

20. ASSISTANCE TO PATRON: The patron requests materials not held in your library. The request must be specific and the immediacy of the requirement must be discerned. The patron is queried as to alternative materials for the same topic, etc.

21. VERIFYING BIBLIOGRAPHIC INFORMATION: The title or item requested is searched to verify bibliographic information.

22. DETERMINING LOCATION (IF NOT A PART OF ACTIVITY 21): The title or item requested is searched to locate a library which owns the material.

23. COMPLETING FORM, MAILING, TRANSMITTING REQUEST: A form is completed giving bibliographic information, location information, address if for mail, and requestor information. The form is then prepared for mailing, or transmitted via teletype, telephone or other means of communication.

24. RECEIVING AND UNWRAPPING ITEM REQUESTED: The item requested is received, and removed from its shipping package.

25. CHECKING REQUEST RECORDS: Request records are searched to locate original request record. Record may be annotated to indicate receipt or record may be attached to item requested.

26. NOTIFICATION OF PATRON WHO REQUESTED ITEM: A notice is typed, or a phone call made, or other means of communication is made to notify patron who requested material that the item has arrived in the library.

27. INVOICING PATRON FOR ILL SERVICES: If the lending library requests payment for photocopy or service charge, an invoice is prepared for the patron. Copies are filed in the appropriate files. The invoice is sent to the requester, or attached to the item.

28. PROCESSING PAYMENT FOR ILL SERVICES: If the lending library requests payment for copying or a service charge, payment is prepared and sent to the lending library. Appropriate records are maintained and filed.

29. PROCESSING OVERDUES: If the requester fails to return the borrowed item by the due date, s/he is notified. An overdue notice may be issued. Fines may be exacted. Fine payment processing would then follow. Correspondence may be initiated with the lending institution, etc.

30. PROCESSING RENEWALS: An extension of the lending time may be requested by the patron. Correspondence to the lending institution is then initiated. Typing, mailing, transmitting request for time extension falls into this category. Circulation records are updated to indicate revised due date.

31. CHANGING CIRCULATION RECORDS, DISCHARGING RETURNED ITEMS: An item is returned by the requestor, for return to the lending institution. The record is checked against the item, and return is noted. The circulation record may be removed to a "dead file" or discarded.

32. RETURNING ITEM (WRAPPING, PREPARING FOR MAIL): The item is wrapped, a label prepared and attached to the shipping package.

33. OTHER BORROWING ACTIVITIES: Enter here any other borrowing activities which do not fall into the above categories. Indicate the time spent in these activities and the total number of requests processed (if applicable).

OTHER ACTIVITIES

34. ADMINISTRATION, SUPERVISION, PROFESSIONAL DEVELOPMENT, MEETINGS, TRAINING, UNASSIGNED TIME (e.g. breaks), PEER CONSULTATION, TELEPHONE: Any time spent in supervising personnel within the department, on administrative duties, such as correspondence, staff review, reports, budgeting, statistics, in training new personnel, conferring with associates, professional reading, staff or professional meetings, telephone answering, coffee breaks or other non-assigned time for which you are paid. Do not include lunch breaks, sick leave or vacation. Do not include time for which you are not paid.

35. DATA COLLECTION FOR THIS STUDY: Enter time spent in filling out this form or reviewing procedures or definitions for this study under this category.

36. OTHER: Enter here only those tasks which do not relate directly to lending or borrowing activities, and which do not fall under any of the above activities.

FORM #8A

INTERLIBRARY LOAN BORROWER'S TRANSACTION LOG

THIS FORM SHOULD BE ATTACHED TO EVERY FIRST, FIFTH OR TENTH ILL REQUEST (DEPENDING ON YOUR VOLUME OF ACTIVITY) RECEIVED FROM A PATRON OF YOUR LIBRARY FOR MATERIALS HELD BY ANOTHER LIBRARY, DURING A THREE WEEK PERIOD. STOP AFTER COMPLETING 125FORMS, OR AFTER THREE WEEKS, WHICHEVER IS FIRST. PLEASE COMPLETE THIS FORM AS FULLY AS POSSIBLE. AFTER 30 DAYS FROM THE DATE OF PATRON REQUEST, OR WHEN THE REQUEST IS COMPLETED, WHICHEVER IS FIRST, ATTACH A PHOTOCOPY OF THIS REQUEST TO THIS FORM AND RETURN TO: M.K. BROWN, WESTERN NETWORK PROJECT, WICHE, P.O. DRAWER P, BOULDER, COLORADO, 80302.

LIBRARY__________________ (8-10)
TRANSACTION B#______________ (11-18)
DATE OF PATRON REQUEST __/__/__ (19-22)
DATE OF DISPOSITION __/__/__ (23-26)

I. PUBLICATION DATA

A. Type of publication (check one) (27)
( ) 1. government document
( ) 2. technical journal
( ) 3. technical report
( ) 4. other non-fiction
( ) 5. classical fiction
( ) 6. popular fiction
( ) 7. non-technical/popular periodical
( ) 8. audio and/or visual material
( ) 9. other (specify)
____

B. Publication date: __________ (28-35)

C. Language(s) (36)
( ) 1. English
( ) 2. German
( ) 3. French
( ) 4. Russian
( ) 5. Spanish
( ) 6. Italian
( ) 7. Other (specify)
____

D. Call number (if known): ____________
(37-42)

II. REQUESTED FROM

______________ (agency name)

A. Reason for choice of this agency (check one) (43)
( ) 1. known to have this item (of personal knowledge)
( ) 2. union catalog indicates agency has item
( ) 3. agency likely to have this item, you think
( ) 4. your ILL procedures specify this agency to be used
( ) 5. other (specify)
____
____

B. What type of agency is this? (check one) (44)
( ) 1. academic library
( ) 2. special library
( ) 3. regional headquarters
( ) 4. other public library
( ) 5. bibliographic center
( ) 6. other (specify)
____

C. Location of this library (45,46)
( ) 1. within your state
( ) 2. in another state (specify)
____
( ) 3. within 25 miles of your library
( ) 4. within 100 miles of your library

D. Request sent by: (47)
( ) 1. telephone
( ) 2. teletype
( ) 3. mail
( ) 4. other (specify)
____

III. VERIFICATION OF REQUEST

A. Did patron verify this request? (48)
( ) 1. yes
( ) 2. no

B. This request was verified in: (49)
( ) 1. NUC
( ) 2. BIP
( ) 3. local/regional union catalog
( ) 4. on-line catalog (e.g. BALLOTS, OCLC)
( ) 5. other (specify)
____
( ) 6. this request was not verified

IV. FORM OF LOAN REQUESTED (50)
( ) A. Original
( ) B. Microform
( ) C. Duplicate/photocopy
( ) D. Other (specify)
____

V. OUTCOME
( ) A. Filled (51)
Delivered by: (52)
  ( ) 1. mail
  ( ) 2. courier
  ( ) 3. other (specify)
  ____
( ) B. Unfilled (53)
Was this request re-requested? (54)
  ( ) 1. yes
  ( ) 2. no
( ) C. Pending (55)

INTERLIBRARY LOAN TRANSACTION LOG -- DEFINITIONS

PUBLICATION DATA

1. GOVERNMENT DOCUMENT: A publication produced by an international, federal, state or local governmental agency or a joint publication of any combination of these.This may be in book or serial form bearing a government imprint.
2. TECHNICAL JOURNAL: A journal (which is not a government document) which is directed to a specific group of persons involved in a specific field of research; a journal which may be produced by a technically oriented organization and may contain more than one technical report.
3. TECHNICAL REPORT: A report (not a government document) based on research in a specific field and directed to other members of that field.
4. OTHER NON-FICTION: Printed works, other than the above, which are factually based. This does not include periodicals, or fiction such as novels, poetry, children's stories, etc.
5. CLASSICAL FICTION: Works of Greek and Latin authors.
6. POPULAR FICTION: Include here all non-classical adult fiction.
7. NON-TECHNICAL/POPULAR PERIODICAL: A periodical which is indexed in a common general index, such as Readers' Guide.
8. AUDIO AND/OR VISUAL MATERIAL: Nonbook library materials which may require the use of special equipment in order to be seen and/or heard (e.g. motion pictures, audio recordings, filmstrips, slides, overhead transparencies, and mixed media kits). Some do not require special equipment in order to be seen and/or heard (e.g. flat pictures, study prints, maps, charts and games.
9. OTHER All materials which do not in any logical manner fit into the above categories.

TYPE OF LIBRARY

1. ACADEMIC LIBRARY: A general library that serves an academic community, such as a university, college, or community college and receives its financial support in part or in whole from the academic insititution to which it is associated.
2. SPECIAL LIBRARY: A service organized to make desirable information available to a particular organization or limited group. Usually such a library is attached to a business, firm, commission, etc.
3. REGIONAL HEADQUARTERS: Usually a public library designated by the state or region as a central processor or switching center for interlibrary loan requests from the libraries in that region.
4. OTHER PUBLIC LIBRARY: A library that serves free all residents of a community, district or region and receives its financial support in whole or part from public funds. This includes state libraries, as well. Do not include, however, regional libraries, that fall into category (3).
5. BIBLIOGRAPHIC CENTERS: A center which processes for the requester interlibrary loans. Such centers include the Bibliographical Center for Research, Denver and the Pacific Northwest Bibliographic Center, Seattle.
6. OTHER: Include here only libraries or agencies which do not fall into the above categories, for example, school libraries.

INTERLIBRARY LOAN LENDER'S TRANSACTION LOG

FORM #9 A

THIS FORM SHOULD BE ATTACHED TO EVERY FIRST, FIFTH OR TENTH ILL REQUEST (DEPENDING UPON YOUR VOLUME OF ACTIVITY) RECEIVED FROM A PATRON OF YOUR LIBRARY FOR MATERIALS HELD BY ANOTHER LIBRARY, DURING A THREE WEEK PERIOD. STOP AFTER COMPLETING 125 FORMS, OR AFTER THREE WEEKS, WHICHEVER IS FIRST. PLEASE COMPLETE THIS FORM AS FULLY AS POSSIBLE. AFTER 30 DAYS FROM THE DATE OF PATRON REQUEST, OR WHEN THE REQUEST IS COMPLETED, WHICHEVER IS FIRST, ATTACH A PHOTOCOPY OF THIS REQUEST TO THIS FORM AND RETURN TO: M.K. BROWN, WESTERN NETWORK PROJECT, WICHE, P.O. DRAWER P, BOULDER, COLORADO, 80302

LIBRARY__________________(8-10)
TRANSACTION L#______________(11-17)

CHECK HERE IF THIS IS A REGIONAL REQUEST_________ (18)

DATE REQUEST RECEIVED BY YOUR LIBRARY___/___/___ (19-22)
DATE OF DISPOSITION___/___/___(23-26)

I. ITEM REQUESTED

A. Type of item (check one) (27)

( ) 1. government document
( ) 2. technical journal
( ) 3. technical report
( ) 4. other non-fiction
( ) 5. classical fiction
( ) 6. popular fiction
( ) 7. non-technical/popular periodical
( ) 8. audio and/or visual material
( ) 9. other (specify)
____

B. Publication date: ___________(28-35)

C. Language(s) (36)

( ) 1. English
( ) 2. German
( ) 3. French
( ) 4. Russian
( ) 5. Spanish
( ) 6. Italian
( ) 7. Other (specify)
____
( ) 8. Unknown

D. Call number: ______________(37-42)

II. REQUESTING LIBRARY:

______________________(library name)

A. What type of library is this? (check one) (44)

( ) 1. academic library
( ) 2. special library
( ) 3. regional headquarters
( ) 4. other public library
( ) 5. bibliographic center
( ) 6. other (specify)
____

B. Where is this library located? (46)

( ) 1. within 25 miles of your library
( ) 2. within 100 miles of your library
( ) 3. within 400 miles of your library
( ) 4. over 400 miles of your library

C. Request received by: (47)

( ) 1. Telephone
( ) 2. Teletype
( ) 3. Mail
( ) 4. Other (specify)
____

III. DID YOU NEED TO RE-VERIFY ITEM REQUESTED?

( ) 1. Yes
( ) 2. No

IV. DISPOSITION OF REQUEST

( ) A. Filled (51)

Form of loan made:

( ) 1. original
( ) 2. microform
( ) 3. duplicate/photocopy
( ) 4. other (specify)
____

Sent by: (52)

( ) 5. mail
( ) 6. courier
( ) 7. other (specify)
____

( ) B. Unfilled

Reason: (53)

( ) 1. could not identify
( ) 2. item not owned
( ) 3. item in use
( ) 4. non-circulating
( ) 5. other (specify)
____

Disposition of request:(54)

( ) 6. passed to another library
( ) 7. returned to sender
( ) 8. other (specify)
____

( ) C. Pending (55)

INTERLIBRARY LOAN TRANSACTION LOG -- DEFINITIONS

PUBLICATION DATA

1. GOVERNMENT DOCUMENT: A publication produced by an international, federal, state or local governmental agency or a joint publication of any combination of these.This may be in book or serial form bearing a government imprint.
2. TECHNICAL JOURNAL: A journal (which is not a government document) which is directed to a specific group of persons involved in a specific field of research; a journal which may be produced by a technically oriented organization and may contain more than one technical report.
3. TECHNICAL REPORT: A report (not a government document) based on research in a specific field and directed to other members of that field.
4. OTHER NON-FICTION: Printed works, other than the above, which are factually based. This does not include periodicals, or fiction such as novels, poetry, children's stories, etc.
5. CLASSICAL FICTION: Works of Greek and Latin authors.
6. POPULAR FICTION: Include here all non-classical adult fiction.
7. NON-TECHNICAL/POPULAR PERIODICAL: A periodical which is indexed in a common general index, such as Readers' Guide.
8. AUDIO AND/OR VISUAL MATERIAL: Nonbook library materials which may require the use of special equipment in order to be seen and/or heard (e.g. motion pictures, audio recordings, filmstrips, slides, overhead transparencies, and mixed media kits). Some do not require special equipment in order to be seen and/or heard (e.g. flat pictures, study prints, maps, charts and games.
9. OTHER All materials which do not in any logical manner fit into the above categories.

TYPE OF LIBRARY

1. ACADEMIC LIBRARY: A general library that serves an academic community, such as a university, college, or community college and receives its financial support in part or in whole from the academic insititution to which it is associated.
2. SPECIAL LIBRARY: A service organized to make desirable information available to a particular organization or limited group. Usually such a library is attached to a business, firm, commission, etc.
3. REGIONAL HEADQUARTERS: Usually a public library designated by the state or region as a central processor or switching center for interlibrary loan requests from the libraries in that region.
4. OTHER PUBLIC LIBRARY: A library that serves free all residents of a community, district or region and receives its financial support in whole or part from public funds. This includes state libraries, as well. Do not include, however, regional libraries, that fall into category (3).
5. BIBLIOGRAPHIC CENTERS: A center which processes for the requester interlibrary loans. Such centers include the Bibliographical Center for Research, Denver and the Pacific Northwest Bibliographic Center, Seattle.
6. OTHER: Include here only libraries or agencies which do not fall into the above categories, for example, school libraries.

APPENDIX E

GLOSSARY OF TERMS

GLOSSARY OF TERMS

GENERAL

Bookstock	Books, and other printed materials, that are cataloged in the same manner as books and that are interfiled with, or may be interfiled with, books. For example, a government document or a yearbook that has been cataloged as a book and shelved with books is to be reported as bookstock. Collections of government documents, pamphlets, paperback books, technical reports, manuscripts, memoirs, proceedings transactions of societies, monographic and publishers' series, etc. that are NOT cataloged in the same manner as books should NOT be considered bookstock. Bookstock may be cataloged by the Library of Congress, Dewey Decimal, or any other classification scheme adopted by the library.
Periodicals	A periodical is a publication constituting one issue of a continuous series under the same title published at regular or irregular intervals, over an indefinite period, individual issues in the series being numbered consecutively or each issue being dated. Newspapers as well as publications appearing annually or less frequenly are included in this definition.
Bound Periodicals	A group of periodicals issued under the same title bound together in a single binding, usually in consecutive order according to volume number or date of publication.
Microforms	Microforms are materials that have been photographically reduced in size for storage, protection and inexpensive publication purposes, and which must be read with the help of enlarging instruments. Examples of microforms are: microfilm, microcard, and microfiche. These are also called microcopy and mictotext.
Printed Government Documents	A printed government document is any publication in book or serial form bearing a government imprint, e.g., the publications of the Federal, State, local and foreign governments and of world organizations, such as United Nations, European Common Market, etc. Do not include printed government documents cataloged in the same manner as books, and not in separate collections: these should be entered as BOOKSTOCK. Report printed government documents housed in separate collections under PRINTED GOVERNMENT DOCUMENTS.

Clerks	This category includes members of the library staff responsible for clerical and secretarial support. They may perform other duties associated with library operations as well. Include only employees paid by the library.
Student Assistants/ Pages	Usually part-time employees, student assistants or pages are those members of the library staff normally paid on an hourly basis and perform tasks in support of library operations, such as shelving, circulation, physical processing and other supportive tasks. Include only employees paid by the library.
Other (excluding personnel responsible for plant maintenance and physical facilities)	Include here all paid employees who do not in any manner fall into the above categories. Include only employees paid by the library. Exclude members of the staff involved in plant maintenance, ground upkeep or in guarding the facilities.
Personnel Paid by Outside Sources	This category applies to all staff members whose salary is paid by other than the library. This would include all special project staff whose salaries are provided by the state, federal government, or any form of grant, as well as regional headquarters staff whose salary is paid for by the region, or a group of libraries.
Volunteers	This category includes all persons who donate their time to support library operations, including faculty members who provide non-paid service. Estimate the fulltime equivalencies of this donated time, NOT the number of volunteers.
Administration	All personnel involved in the management and administration (planning, budgeting, personnel administration etc.) of the ENTIRE library. This would include the library director, assistant directors, accountant, personnel and business managers, any support staff directly attached to the administrative offices of the library. This does NOT include administrative positions within departments of the library (e.g. catalog department chief).
Materials Finishing	The administrative unit, or personnel if there is no distinct department, in charge of repair, edge stamping, labeling, etc. This section, department or division may be variously called binding and finishing, end-processing, or materials finishing.

Audio and/or Visual Materials	These are nonbook library materials. Some require the use of special equipment in order to be seen and/or heard (e.g. motion pictures, audio recordings, filmstrips, slides, overhead transparencies, and mixed media (multimedia) kits). Others do not require the use of special equipment in order to be seen and/or heard (e.g. flat pictures, study prints, maps, charts and games).
Other	All materials which do not in any logical manner fit into the above categories (e.g. technical reports, pamphlets, paperback books, manuscripts, etc. that are not cataloged as books).
Titles	A publication which forms a separate bibliographic whole, whether issued in one or several volumes, reels, discs, slides or parts. It applies equally to printed materials, such as books and periodicals, as well as to audio and/or visual materials and microforms.
Volumes	A physical unit of any printed, typewritten, handwritten, mimeographed, or processed work, normally contained in one binding or portfolio, hardbound or paperbound, which has been cataloged, classified, and/or made ready for use.
Fulltime Equivalencies	The total number of employee hours paid for annually to all employees in the category, divided by the total annual hours for which a normal fulltime employee is paid. Thus, if the normal work week for a fulltime employee is 40 hours, the total annual hours is considered to be 2080 hours for a fulltime employee, regardless of vacation or paid sick leave.
Professional Librarian	A library employee who is considered by the library, and employed by the library, as a "librarian," either by virtue of education, certification, or other qualification, and whose salary is paid by the library.
Other Professional	This category includes members of the library staff who do not act as librarians but are considered professional members of another profession and perform that function within the library (e.g. accountant, systems analyst, business manager, curator). Include only those other professionals who are paid by the library.
Library Assistant	This category includes members of the library staff who perform technical tasks related to public services, technical processing, or other library function, and who are not librarians. Staff titles vary, and include paraprofessional, library technical assistant and library assistant. Include only those who are paid by the library.

ACQUISITIONS DEPARTMENT

The administrative unit, or personnel, if there is no distinct unit, in charge of acquiring (and perhaps selecting) books, periodicals and other materials by purchase, exchange or gift, and of keeping the necessary records of these additions.

Review book order requests; review selection media; select titles to be ordered; preview; make want lists.	Materials requested for purchase are reviewed for duplication of backordered materials or of materials in the collection; professional literature, bibliographies, etc. are reviewed for possible materials to be ordered by the library; titles are selected for ordering; publisher or vendor preview materials are reviewed for possible purchase; items for possible ordering are listed for future review and possible purchase.
Approval plan processing	Materials received on approval plan are reviewed for possible purchase; if the item is to be purchased, the item is forwarded for payment processing and record entry; if the item is not desired by the library the item is prepared for return.
Type/write order request card	After a title has been reviewed and selected for purchase, an order request card is created for processing through the acquisitions department.
Preorder searching of an automated or other system (MCRS, BATAB) records	Prior to ordering the item requested, bibliographic data is checked, publisher and price information is gathered from an automated system or other system records. This data may be incorporated into a form for future use in cataloging.
Other preorder search, and verification of bibliographic information	Prior to ordering an item which has been requested, bibliographic data is checked, publisher and pricing information gathered from sources such as BIP, Forthcoming books, NUC, LC proof slips, etc. This data may be incorporated into a form for future use in cataloging.
Assign vendor and fund	A supplier of the material requested is identified and the appropriate fund or account to which the item will be charged is assigned.
Prepare multiple order record	A record of the material to be purchased is created, usually in multiple copies to be used for control of the order within acquisitions and sometimes as a temporary record in the public catalog.

Type purchase requisition	If not included in the preparation of a multiple order record, a request to be sent to the vendor is prepared indicating materials to be purchased, sometimes list price and bibliographic data, along with publication numbers or vendor assigned control numbers of materials requested.
Revise, sign and mail requests	The order records and purchase requisitions are examined for accuracy, and corrected as necessary. Requisitions are then signed and mailed to the vendor.
Work with automated system for acquisition purposes (other than preorder searching)	A computer system may be used to produce order records, purchase requisitions, vendor and fund assignment, book fund accounting, preparation of accession lists, producing notification of requestor, preparation of record invoice for payment, etc. If such a system is used please specify system in the space provided.
Burst (separate) order forms and sort	The multiple order record is separated into appropriate groups for filing or processing. These forms may be alphabetized according to the entry to be used in the file for which it is intended.
File forms	The separated order records are interfiled into appropriate catalogs or files. Filing may be checked by another employee for accuracy of filing, and revised or corrected as necessary.
Encumbrance or prepayment accounting routines	The fund assigned to the order is charged for the item to be purchased if prepayment is necessary, or the appropriate amount is encumbered from the fund. Payment is then processed and approved for payment to the vendor either prior or after receipt of the material requested depending upon the policies of the vendor and the library.
Unpack books; check against packing list	The materials requested are received and removed from shipping cover. The enclosed packing list is then checked against the receipts. Materials not received are forwarded to the appropriate personnel for claiming, and materials not ordered are forwarded to the appropiate personnel for returns.
Receipt and book accessioning routines	Materials that have been received are checked against order records for accuracy. Records are then pulled or annotated to note arrival of the requested item. Depending upon the policy of the library, the item may be assigned an accession number as a control of the item.

Notification of requester	The patron or staff member requesting the item is notified of the arrival of the item. A standard notification form may be prepared for mailing to the requester, or the requester may be notified by telephone.
Gift routines	Gifts received from individuals, or foundations. are reviewed for possible inclusion in the library collection. Items are checked to insure against unnecessary duplication. Gift record forms are prepared, giving source of gift, date of gift, necessary bibliographic information, etc. Letters of gratitude may be issued to the donor.
Exchange routines	Collections of other libraries, agencies or individuals are reviewed for possible trade of items within your library collection. This may be a part of a sharing agreement, in which individual libraries agree to develop collection in specified areas, and the exchange furthers this development for each library, or a one-time exchange to complete certain series within each library, etc.
Check-in, prepare invoices for payment	The received item is checked against order records, and the record is annotated to note the receipt. Forms are prepared to process payment to the vendor for the item and forwarded to the appropriate accounting division.
Clear in-process file	Records for items which have been ordered and received are removed from the in-process file and may be attached to the item or forwarded to another receiving file with notations of date received and action taken.
Claims routines	After a specified period from the time an item is ordered, the vendor is re-queried to supply the item. A claim is then filed in a claims file to control the progress of the item. Replies to the claim are reviewed, and appropriate action taken on the reply is taken.
Cancellations routines	An order which has already been issued is canceled either due to a duplicate receipt, unsatisfactory service from the vendor, or a decision not to purchase the item. A notice is prepared for the vendor, and records concerning the order are removed or annotated to reflect the cancellation of the order.

Return routines	Items received on a preview basis, approval plan, or in error are prepared for shipment back to the vendor. Records of this disposition may be prepared and filed or forwarded to the appropriate section.
Out-of-print routines	The library may be notified that an item which has been ordered is out-of-print by the vendor. The title is then reviewed for possible alternative action. If the item will not be sought elsewhere the appropriate records are annotated as out-of-print ("o.p.") and removed to the designated files for out-of-print materials. The item may be sought elsewhere from such vendors who supply out-of-print materials if the title is desired.
Renewals or continuations processing	Serials, standing orders, or other long-term orders are reviewed periodically for suitability to the library. If the order is still desired, the vendor is notified of continuation of the order, payments for the order may be made and records reinstated. This would include renewals also.

CATALOGING DEPARTMENT

The department, division, or administrative unit of the library (or personnel, if no distinct department) responsible for classification, bibliographic description, preparation of, and maintenance of bibliographic entries of library holdings.

Searching for LC card or copy, or other cataloging copy (e.g. MCRS, NUC)	Locating cataloging copy of copy closely approximating titles to be cataloged. This includes searching proof slip files, NUC, or the LC catalog of printed cards for cataloging input and card reproduction. May also include searching cataloging data from microform card catalog sources.
Other bibliographic verification	Searching and verifying of bibliographic information other than that included in the above.
Photographing card copy from NUC or other card source	Copying, by means of a camera, cataloging source copy for use in cataloging and/or reproduction of catalog cards.
Matching card or card copy with item	Prior to cataloging an item, cataloging copy or cards are matched to the item which it represents. Author and title are checked against the cards. Cards or card copy are then attached to item.
Added copy/added volume routines	Additional copies or further volumes of a title which has previously been cataloged by your library. Depending upon library policy, the main entry and shelf list card (occasionally the Kardex record) may be annotated to indicate the item has arrived. Some additional processing may also be necessary.
Original cataloging	Descriptive cataloging, subject analysis, classification, analytics and authority work (i.e. name and subject, etc.) are performed where no LC copy or adequate cataloging data are available. A cataloger prepares a work form, or work sheet to be used in typing copy for catalog card reproduction or for input into an automated system, book or microform catalog.
Cataloging with cards or card copy (including Poloroid copy)	The classification and description of an item using LC cards, LC-NUC copy, commercial cards, CIP data from the title page verso, commercial cards, or card copy.
"Fast-Cat", rush cataloging, abbreviated cataloging	The classification and description of an item in an abbreviated form so that the item can be used or circulated immediately.
Cataloging from automated (e.g. OCLC) or other cataloging system records	The use of an automated cataloging system (e.g. OCLC, BALLOTS) or other system (such as MCRS) to locate cataloging records. The classification and description of the item may then be taken from these records. Please specify the system employed.

Cataloging revision	The review of cataloging and classification by someone other than the cataloger him/herself to insure correctness and appropriateness. Corrections and changes are made as necessary.
Manual production/ reproduction/printing of catalog cards	Catalog, shelf list and authority cards are produced or reproduced for use in the various card catalogs. A master card is sometimes typed, to be used in reproducing sets of unit cards or a complete set of cards is typed. A close copy may then be modified for the same purposes. The modified card then serves as a master card. Also included in this category are the typing of card headings, printing of cards, copying of card sets.
Revision of catalog cards	Produced card sets are proofed for accuracy of headings, typographical errors, or a master card is proofread for accuracy. Corrections are made as necessary.
Alphabetizing, pre-filing of catalog cards	Card sets are sorted and alphabetized for new titles, main entry and analytic cards for added volumes, cards for titles recataloged or reclassified, cards withdrawn to update entry, etc. These cards are arranged into 26 groups according to the first letter of the first word of catalog entry with additional sortings of each subgroup by 2nd and 3rd letter, and the final arrangement of each subgroup in alphabetic order, word by word, to the end of the entry of each card.
Filing catalog cards into catalogs and filing revision	Cards which have been prefiled into alphabetical groups and according to receiving catalogs are then placed in the appropriate filing order for the catalog. Interfiled cards may be placed above the drawer bar to be checked by another employee for accuracy. Filing is then corrected or revised and placed under the bar.
Prepare and revise circulation card, book pocket	A book pocket and card to be placed in the item may be prepared giving main entry, title, call number, accession number, etc. This pocket and card is then reviewed for accuracy and attached to the item for eventual permanent placement in the item.
Prepare book for shelf	The item is stamped with the library ownership stamp and accession number. A gift form may be attached to the item. The item may be rebound for the shelf, and spine label and plastic cover may be attached.

SERIALS DEPARTMENT

The administrative unit, or personnel, if there is no distinct department, in charge of handling serials which may include ordering, checking-in, cataloging and preparation of binding.

Bibliographic searching	New serial titles are searched in publisher lists, bibliographic sources, etc. for cataloging information to be used in cataloging the title. Bibliographic data may be photographed or reproduced as copy for cataloging the title.
Other bibliographic verification	Other bibliographic checking is often necessary for a title which has changed title, publisher or issuance policy several times. Additional verification may also be required for analytics, and authority work.
Serials/periodicals control (check-in) on automated system	Successive issues of a serial title which is already cataloged in your library are checked in Kardex file, system records, or other control of serials. The item is checked against the record to insure that the title is the same that appears on the record, that back issues have all been received, etc. A notation, such as a check mark, or date of issue, is made on the record to verify its receipt. Additional posting may also be performed.
Original cataloging of serial titles	A new serial title which has been received by the library. Descriptive cataloging, subject analysis, classification and analytics are performed where no LC copy or adequate cataloging data are available. A cataloger prepares a work form, or sheet, to be used in typing copy for catalog reproduction, input into an automated system, or creation of a Kardex record. Preparation of work sheets for entries into lists of serials may also be done.
Serials cataloging with cards or card copy	A new serial title or additional copy of a serial title already held by the library,is received. The cataloger classifies and describes the title using LC cards, Union List cataloging data, commercial cards, or card copy.
Cataloging serials from automated or other system records	A new serial title is searched against the automated system. If the title is located, data is manipulated according to the policies of the library to create a record or cards for the title. Please specify system.
Change in author/title routines	A serial which is already held by the library changes publisher, title, or sponsoring agency. Cards for the serial (catalog and Kardex) are pulled for annotation (if a minor change) or for new cards. Appropriate cross-references, card and Kardex revision, cataloging revision (if required) are made.

Claims routines	An issue of a serial title has not been received in a specified time since publication. The vendor is notified to supply the item, records are annotated to indicate the issuance of a claim, and a claim record may be filed in a claims file. When the item or other notification of the disposition of the request is received, the claim is pulled and attached to the item or records are annotated to indicate other disposition such as out-of-print, not issued, etc.
Bindery routines	When a volume is complete, a bindery slip is filled out and attached to the item. Other issues of the volume may be collected from the stackes, and the entire volume, if complete, forwarded to bindery. Records are annotated to indicate the volume is in bindery.
Cancellation routines	Continuation of a serial title subscription is no longer desired by the library. The vendor is notified to cancel the subscription. Records are annotated to note discontinuance (closed-out), and Kardex record may be removed to a "dead file."
Renewal and ordering routines	A serial title is reviewed for inclusion in the library collection. If desired, the title is ordered from the appropriate vendor and payment processed. A serial title, already owned by the library, is renewed after the prior subscription terminates.
Typing/revising Kardex records	New serial titles, additional titles, changes in title often require new Kardex records. The Kardex card is typed, reviewed, and corrected if necessary.
Manual production/ reproduction/printing of catalog cards	Catalog cards, shelf list, and authority cards are produced or reproduced for use in the various card catalogs. A master card is sometimes typed, reviewed, and corrected as necessary. The master copy may then be used for reproduction purposes. Headings may be typed on card sets. Printing and copying of cards is also included in this category.
Invoice processing	A serial which has been ordered or renewed must have payment processed. An invoice may be received from the vendor for payment. This invoice is then recorded in an appropriate record and forwarded to accounting for payment.

INTERLIBRARY LOAN DEPARTMENT

Lending Activities

The administrative unit, or personnel, if no distinct department, in charge of borrowing materials from and lending materials to other libraries.

Borrowing request	A request sent to another library by your library for materials requested by a patron of your library. A request should be counted only once regardless of the number of libraries queried for the item requested.
Lending request	A request sent from another library for materials believed to be owned by your library.
Filled request	The material requested is loaned to the requestor, or a photocopy of material requested is supplied to the requestor.
Unfilled request	The material requested cannot be supplied to the requestor through the interlibrary loan processes.
Locally	Locations within certain bounds of proximity that your library considers "close-by," based upon turn-around and ease of access.
Receiving request	A request is received from another library for materials held by your library. The request may be received by telephone, mail, teletype or other means of communication.
Verifying request	Bibliographic data may be verified to insure correctness of entry given in request.
Checking serials/ periodicals catalog	Requests for articles in periodicals or serials must be checked against library holdings. Records of periodical/serial titles (e.g. Kardex record, serials lists) are checked to ascertain the availability of the item requested.
Checking catalog, locating item requested	The library catalog is searched to locate the call number or location of the title requested. Serials or Kardex records may be checked to insure that the library has the issue requested.
Reply (if your library does not own or cannot circulate requested item)	After the appropriate records have been checked, the item is determined to be unavailable through your library. Forms are then annotated and a response is prepared for the requesting library. Reply may be teletyped, telephones, mailed to the requesting library.
Searching shelves, pick-up item requested	The library shelves are searched to locate the item requested. The item, if on the shelves, is retrieved for lending purposes.

Checking pages requested for copying	Pages are checked to insure correctness of request, and corrected where necessary. Pages are then marked for photocopy.
Sending to photocopy	The item is then delivered to photocopy so that the pages requested can be copied.
Copying pages requested	The pages that are needed are copied, or microcopied.
Invoicing and processing payment for photocopy	The borrowing institution is billed for photocopy according to the rates established by your library. An invoice is prepared, reviewed, and corrected as necessary. The invoice is then issued to the borrowing instituion, and necessary records maintained. Payment is then processed upon receipt according to the policies of your library.
Check-out/circulate item	A card or record is created to indicate borrower, title, due date, etc., and filed with other circulation records. A card is included with item to reflect due date.
Wrapping, distributing, preparing for mail	The item or photocopy is properly wrapped for shipment, addressed, etc. The item or photocopy may be hand delivered or prepared for messenger service as well.
Overdue routines	The item which has been lent to the requesting institution is overdue or requested by another patron. The item is then requested from the borrowing institution for return. Records are annotated to indicate that the item has been requested. If the item is not returned the requesting institution is billed for the amount of purchase of the item.
Renewal routines	The borrowing institution requests an extension of the loan period. If the extension is granted, circulation records are annotated to reflect the revised due date.
Unwrapping, inspecting returned items	Returned items are received, unwrapped, inspected to insure against damage, and that the appropriate item is enclosed.
Changing circulation records/discharging item	Circulation records are annotated to reflect the return of the item, and record is removed from active files.
Reshelving returned items	The returned item, after discharge, is returned to its appropriate place on the shelf according to classification or other shelving scheme.
Invoicing and processing payment for ILL services	If your library charges for lending materials from its collection, the borrowing institution is invoiced, and upon receipt of payment, the payment is processed through the appropriate channels according to library policy.

INTERLIBRARY LOAN DEPARTMENT
Borrowing Activities

Assistance to patron	The patron requests materials not held in your library. The request must be specific and the immediacy of the requirement must be discerned. The patron is queried as to alternative materials for the same topic, etc.
Verifying bibliographic information	The title or item requested is searched to verify bibliographic information.
Determining location (if not a part of above)	The title or item requested is searched to locate a library which owns the material.
Completing form, mailing, transmitting request	A form is completed giving bibliographic information, location information, address if for mail, and requestor information. The form is then prepared for mailing, or transmitted via teletype, telephone or other means of communication.
Receiving and unwrapping item requested	The item requested is received, and removed from its shipping package.
Checking request records	Request records are searched to locate original request record. Record may be annotated to indicate receipt or record may be attached to item requested.
Notification of patron who requested item	A notice is typed, or a phone call made, or other means of communication is made to notify patron who requested material that the item has arrived in the library.
Invoicing patron for ILL services	If the lending library requests payment for photocopy or service charge, an invoice is prepared for the patron. Copies are filed in the appropriate files. The invoice is sent to the requester, or attached to the item.
Processing payment for ILL services	If the lending library requests payment for copying or a service charge, payment is prepared and sent to the lending library. Appropriate records are maintained and filed.
Processing overdues	If the requester fails to return the borrowed item by the due date, he is notified. An overdue notice may be issued. Fines may be exacted. Fine payment processing would then follow. Correspondence may be initiated with the lending institution, etc.
Processing renewals	An extension of the lending time may be requested by the patron. Correspondence to the lending institution is then initiated. Typing, mailing, transmitting request for time extension falls into this category. Circulation records are updated to indicate revised due date.

Changing circulation records, discharging returned items	An item is returned by the requestor, for return to the lending institution. The record is checked against the item, and return is noted. The circulation record may be removed to a "dead file" or discarded.
Returning item (wrapping, preparing for mail)	The item is wrapped, a label prepared and attached to the shipping package.